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# RAILWAY AGE

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## WEEK AT A GLANCE

**REVENUE FROM COLOR:** Experience is showing that the use of the right color in the right place on the railroads makes a difference in the attitude of employees and customers, in the productiveness of workmen, and in accident rates—differences that show up in the profit and loss statement so plainly that they can't be removed by snorts of derision from any unconvinced minority whose grandfathers got along without such new notions. The scientific background that ties in with this convincing experience is outlined in one of this week's illustrated articles, by the director of the Color Research Institute.

**HOLES IN THEIR POCKETS:** Comparing 1947 with the last prewar year (1941) the Interstate Commerce Commission's statisticians have put in terms of dollars and percentages, in the latest "Monthly Comment," the railroads' difficulties in making ends meet so long as government-fixed revenues fail to keep pace with expenditures also largely government-fixed. In 1947 the railroads took in 62.4 per cent more in operating revenues than in 1941, the result of record traffic and of some (but, obviously, not enough) rate increases. But in 1947 they were not able to transfer to net income as much as they did in 1941 (the actual results were \$480 million as against \$501.4 million), even though they were by no means rolling in wealth in the prewar year—as the security markets clearly showed. These and other significant data are summarized in an article herein.

**"MAHAFFIE" BILL MOVES:** The decks are clear for the Senate to act promptly on a new version of the so-called Mahaffie bill to implement voluntary adjustments of capitalization or debt by railroads not in bankruptcy. Provisions are incorporated in the new draft of the legislation to allow several companies undergoing reorganization to take advantage of some of its provisions, under limitations imposed through the courts and the Interstate Commerce Commission, but the bill is much less liberal in this respect than the proposal sponsored by Senator Clyde Reed, which encountered a lot of opposition, for easier debt adjustment for roads undergoing reorganization. Provisions of the compromise bill are outlined in the news.

**SIMPLER LOADING DEVICE:** A modification of a wartime development is the new "damage-free" Evans loader applied to Monon box cars in general merchandise service. A description appears in this issue (page 45).

**ECONOMIZING IN ELECTRIFICATION:** High first cost has been one of the fundamental reasons why main-line electrification has not been more generally adopted, and now the engineers are coming along with ways and means to cut these high first costs at the very time when other motive power types appear to be losing some of the comparative cost advantages they have enjoyed. An article this week by L. W. Birch of the Ohio Brass Company suggests how the total cost of electrification may be re-

duced from 11 to 14 per cent by modifications of accepted practices in the design and installation of the overhead distribution system, and an editorial points out that possibilities of substantial savings in other phases of an electrification project—locomotive construction and the supply and conversion of power—likewise are under active study.

**PROFITABLE INTERLOCKING:** The installation of a modern electric interlocking at a three-railroad intersection in Illinois has resulted in the elimination of 55,000 train stops annually, many of which cost one or two tons of coal each in addition to the time loss. A description of the installation appears in the illustrated article on page 42.

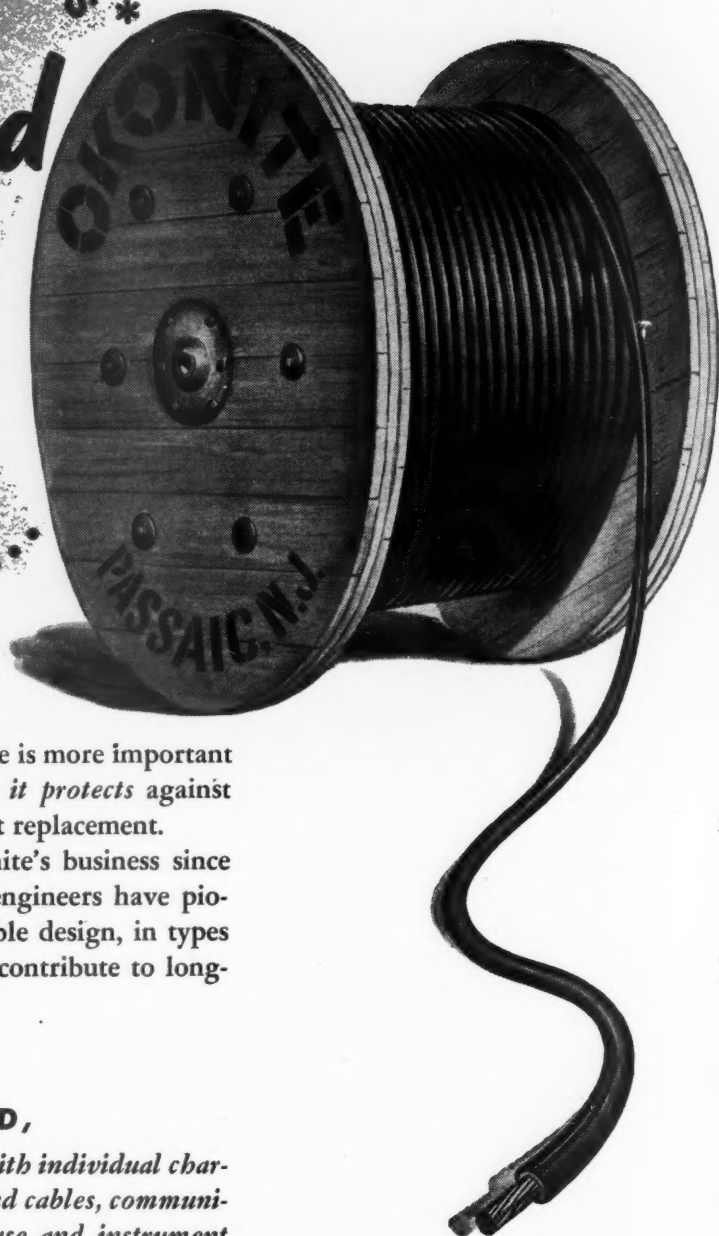
**WHENCE DIESEL PARTS?:** As more Diesel-powered locomotives are installed the provision of replacement parts for them becomes a matter of increasing importance to their most economical operation and to the railroad's budget. A decision must be made as a matter of fundamental policy whether it is to the road's advantage to obtain parts from the locomotive builder or suppliers recommended by him, from the open market, or from the railroad's own shops. This question is discussed in our leading editorial, where the point is made that there are advantages to using the builder's parts that merit earnest consideration along with other factors that show up directly in the budget.

**EQUAL COACH FARES:** As a result of the most recent commission decision affecting passenger fares in the West and on some Southern roads, the basic one-way coach fare is now 2.5 cents per mile all over the country, except that the New Haven, where passenger revenues are of greater importance than on most roads, has a 2.875-cents rate. The I. C. C. action is summed up in the news pages.

**DESIGNED FOR COMFORT:** In the design of 21 long luxurious coaches recently completed by A. C. F. for the Pennsylvania the primary consideration was the overnight traveler's comfort. Spacious lounges, more leg room, a new air-conditioning arrangement, extra luggage space, restful colors, ample illumination, divided panorama-type windows, pneumatic end-door openers, roller-bearing trucks with combination helical and elliptical springs, tight-lock couplers—these are some of the features of this equipment. Details appear in the illustrated article on page 50.

**IN THE BACK OF THE BOOK:** The Missouri-Kansas-Texas is seeking Kansas City's help in getting through a plan for a Kansas City-Mexico City through car, in the operation of which the Missouri Pacific would participate. . . . Gross in January was 8.5 per cent over the same 1947 month. . . . A House committee on foreign aid joins the procession of advocates of an output of 14,000 freight cars monthly. . . . The Department of Justice has found some more instances of what it considers overcharges by the railroads on government wartime freight.

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## DIESEL MAINTENANCE POLICY IS BECOMING A MAJOR ISSUE

Railroad management is going to be faced with a policy decision with respect to the maintenance of Diesel-electric locomotives before too long. An intelligent consideration and discussion of the facts involved is needed to assure that the decision, when made, will be a correct one. This question has to do with repair parts for Diesel locomotives—are they to be secured from the original builder or from suppliers recommended by the builder; will the railroads attempt to manufacture them in their own shops; or will they buy them in the open market?

The Diesel-electric is essentially an automotive type of machine and, unlike steam power, its maintenance is not a problem of inspecting, removing, *repairing* and replacing parts—but one of inspecting, removing and replacing defective parts with parts secured, as a rule, from sources outside the railroad. The Diesel-electric locomotive has an infinitely greater number of parts than a steam locomotive. These parts are of intricate design, built to close tolerances and to work together as a unit assembly, upon the **successful operation** of which depends the reliability of the locomotive as a whole.

As the number of Diesel-electric locomotives increases and their mileage accumulates, the maintenance expense and the money invested in spare parts continually increase; and it is natural that

railroad officers should begin thinking in terms of controlling and reducing this expense. In the light of their experience in maintaining steam locomotives, it is not surprising that the possibility of producing spare parts in their own shops or encouraging competition in the interest of price reduction should occur to them. Whenever railroads have gone into the production of repair parts for the equipment which they operate it has been in self-defense—to guarantee a supply of needed parts under all conditions or to assure the supply of these parts at a reasonable cost.

Three outstanding factors appear to favor securing standard parts either from the builders of the original equipment or suppliers recommended by those builders. These are the matter of engineering standards, the quality of the material, and the standard of workmanship. The builder of the original equipment designed the locomotive parts in the process of designing the complete machine; and his experience in the functioning of the complete machine broadens his ability to design and produce replacement parts that will function with the greatest reliability. When replacement parts are secured from the builder of the original equipment or from recommended suppliers, there is also the matter of the responsibility of the builder for the functioning of the locomotive in the hands of the railroad.

Under existing conditions the builders are able to maintain accurate and comprehensive service records of the performance of individual parts and, immediately one railroad encounters difficulty with any part, the builder's service-engineering organization is able to work to the ultimate benefit of all railroads by making available the experience gained in solving problems which originated on individual roads.

This subject is of such great importance to all railroads that considerable exchange of ideas should be engaged in before final decisions are made.

## "OPERATION DISASTER"

Recent difficulties with high water, particularly in the South, are merely skirmishes with the advance guard of a perennial foe which may be expected to strike in force at any time during the next few months. The extremes of weather of the past year or so suggest that nature is becoming, if anything, even more capricious. To be prepared for anything less than the worst is to invite disaster. What every railroad needs is plan for an "operation disaster," to adopt a military term—a program for dealing effectively with trouble wherever it occurs.

The principal measure of success in the battle with high water in its various forms is the degree to which delays to trains are avoided or minimized. The problem has two aspects, namely, (1) the location and construction of the exposed property in a manner to make it as nearly invulnerable as possible, and (2) adequate preparation for trouble so that, if disaster should strike, the restoration of the property—and of traffic—will go forward swiftly and smoothly.

It is impracticable to make all property completely invulnerable to all stages of high water. But there is a great deal that can be done to avoid or minimize trouble by strengthening the exposed structures where past experience indicates that difficulty may arise.

Sections of line that have been repeatedly flooded can often be relocated on higher ground or otherwise placed beyond the reach of swollen streams. In some places tracks on ground subject to flooding have been anchored in position. Where existing grade lines across streams have proved to be too low to prevent frequent interference from high water, difficulties can often be greatly reduced by raising the grades a few feet.

In dealing with high-water trouble after damage has been done the secret of success is adequate advance planning. Of vital importance in such forehandedness is an appreciation of the role and value of mechanized equipment—especially that of the off-track type—in restoring the tracks and roadbed.

No "operation disaster" is complete unless it includes the fullest possible use of such machines, and presumes a full understanding on the part of all concerned of the many ways in which such equipment can be used in restoration work. Full advantage should also be taken of available contractors' equipment, as well as that owned by the railroad. To be ready for instant action in the event of disaster an organization will need also to have at its command ample supplies of timber for emergency trestles, falsework and cribbing; and plenty of filling material and rip rap too.

A periodic check-up on available means for avoiding high water, and for remedying its ravages when they do occur, will usually repay the effort and expense.

## RAILROADS RATE LOW WITH PUBLICITY PEOPLE

The magazine "Tide"—a business paper in the field of advertising—recently conducted a survey among "200 leaders in advertising, marketing, public relations and related fields." Among the requests made to these "200 leaders" was that they designate the industry which, in their opinion, stood first in "having generally good public relations" and that which outdid the rest in having "generally bad public relations." The automobile industry led the field in favorable opinion; and the railroads were the most frequent choice in the "generally bad public relations" category, "with steel a close second and coal a lagging third."

This poll presents quite a contrast to the results of the general opinion survey conducted for the petroleum industry in 1946, which showed the railroads leading all other industry in favorable opinion—the automotive industry running second, and not a very close second either.

Considering the relative expenditures of the automotive and railroad industries for the services of people who make a living from advertising and publicity, it is, perhaps, not strange that these professionals hold the railroads in comparatively low esteem. A more disturbing indicator, possibly, of the railroads' current standing in public opinion is their comparative position on the so-called "Twohey press rating index," reported in a more recent issue of "Tide." This index\* based on the frequency and display accorded to favorable news printed in metropolitan newspapers in the second half of 1947, gives, in descending order, the following numerical standing of four major industries: Automobiles, 115.6; oil, 85.8; air lines, 63.4; railroads, 34.2.

All of these industries had unfavorable news pub-

\* Described in *Railway Age*, December 6, 1947, page 65.



lished about them—e.g., shortages, accidents, price and rate increases—but, it is asserted, “the railroads failed to compensate for the normal run of such bad news” by offsetting emphasis in their news releases on “public service aspects” of their business. The news that really counts as far as the railroads are concerned, this index indicates, is not primarily reports of industry-wide accomplishments, but the press releases of *individual companies*. Railroads which produce a lot of news on service improvements command attention in the press, not only to their own benefit but to that of the entire industry.

## JERSEY JUSTICE

The state of New Jersey, as noted in these pages three weeks ago, exacts taxes from its railroads which exceed the net earnings of these railroads from their service in the state. What this means, in substance, is that purchasers of railroad transportation in other states served by the railroads which traverse New Jersey not only have to pay rates sufficient to defray the usual costs of providing railroad service—but, in addition, are mulcted to make up the difference between the sum exacted by New Jersey in railroad taxes and the lesser sum which the railroads have available from their Jersey business with which to pay these taxes. In short, the costs of government in New Jersey are defrayed, in part, by patrons of railroad service in neighboring states.

New Jersey makes a curious atonement to its neighbors for this exaction—that is, it lets them operate their trucks through its territory without paying a single penny toward the cost of maintaining what is one of the most highly developed and expensive systems of highways to be found anywhere in the country. Moreover, these operators may register their vehicles in Jersey at one of the lowest rates for license tags obtainable anywhere in America.

The hitch in all this lies, of course, in the fact that railroad patrons in New York and Pennsylvania who are the involuntary subsidizers of governmental costs in New Jersey are, quite likely, not the same set of Pennsylvanians and New Yorkers who are receivers of Jersey's largess to truck transportation. New Jersey seems to have adopted from the mysterious realm of theology a plan for the vicarious remission of indebtedness—where the one who gives is not the one who gets. Whether the economic advancement of a community can be secured by abandoning economic principles and substituting those of another realm of activity remains to be seen. The citizens of New Jersey, no less than the railroads, are the guinea pigs in an experiment from which only an incurable optimist could expect a favorable outcome.

## ELECTRIFICATION'S FUTURE

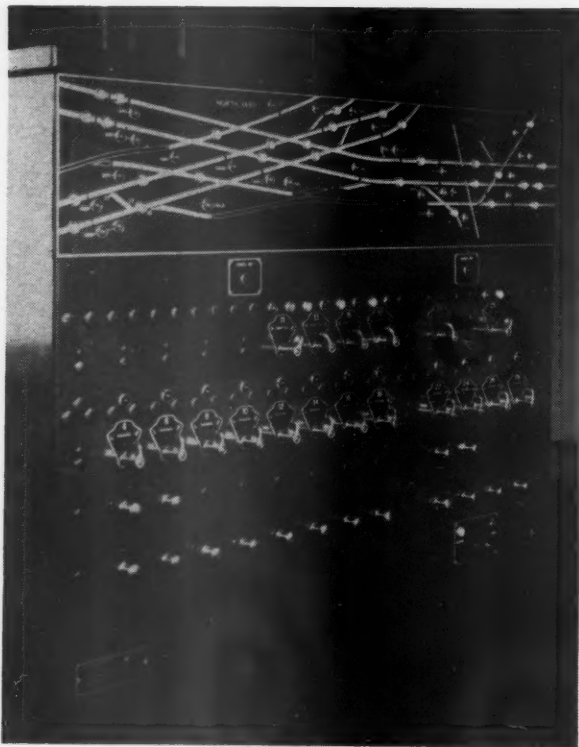
How can the cost of railroad electrification be reduced? Several technical papers presented at the meeting of the American Institute of Electrical Engineers at Pittsburgh divided the question of cost reduction into its component parts—namely, power supply, conversion, power distribution and locomotives. Summaries of these reports were published in the *Railway Age* of January 31. In their present form, all but one of the papers offer qualitative, rather than quantitative information. It is the expectation of the committee which initiated the study that all of the papers may later be combined into a comprehensive and more quantitative statement.

Some engineers believe that, if electrification costs can be reduced one-third, electrification may be used advantageously in several places, including lines with only moderate traffic. It would appear, however, that such a cost reduction would entail heroic measures, but costs are relative and a survey of the present situation indicates that there are possibilities of such a reduction. For example, the cost of power for city transit lines declined 27 per cent in the ten-year period ending November, 1947. It is improbable that this decline can continue, but it has lasted in the face of rising prices of oil and coal. Electrical engineers who have studied means of reducing conversion costs suggest that trolley voltages of 6,000 d.c., or 22,000 a.c., be used. This would reduce conversion costs, but the proposal meets with objections from the locomotive builders, since it would entail development and probably increased locomotive manufacturing costs.

The A.I.E.E. paper which produced actual figures on cost reduction was presented by L. W. Birch of the Ohio Brass Company, Mansfield, Ohio. It suggests means for revising design and construction methods which would effect economies sufficient to reduce the total cost of electrification from 11 to 14 per cent. A summary of this paper is published in this issue.

Locomotive builders suggested new design of electric locomotive which, it is said, should cost about 58 per cent as much as a Diesel of the same rail-horsepower rating. This might represent a relative cost reduction of as much as 20 per cent, considering only the locomotive.

Primary objections to electrification are the large investment in fixed property and the fact that the locomotives can not run out from under the overhead wire. On the other hand, electric locomotives can out-perform other types, and they enjoy the lowest maintenance costs. Efforts of electrical engineers, coupled with rising prices of fuel, may thus conceivably make railroad electrification appear more attractive under a wider range of conditions than it has been in recent years.



Above—The control machine for the interlocking is the miniature-lever type, and is located in the west end of the North Yard office. Below—Northbound C. & E. I. train, "The Whippoorwill," leaving Danville station. Color-light dwarf signals 10R, 16RB and 18RC, from left to right, are shown in the foreground

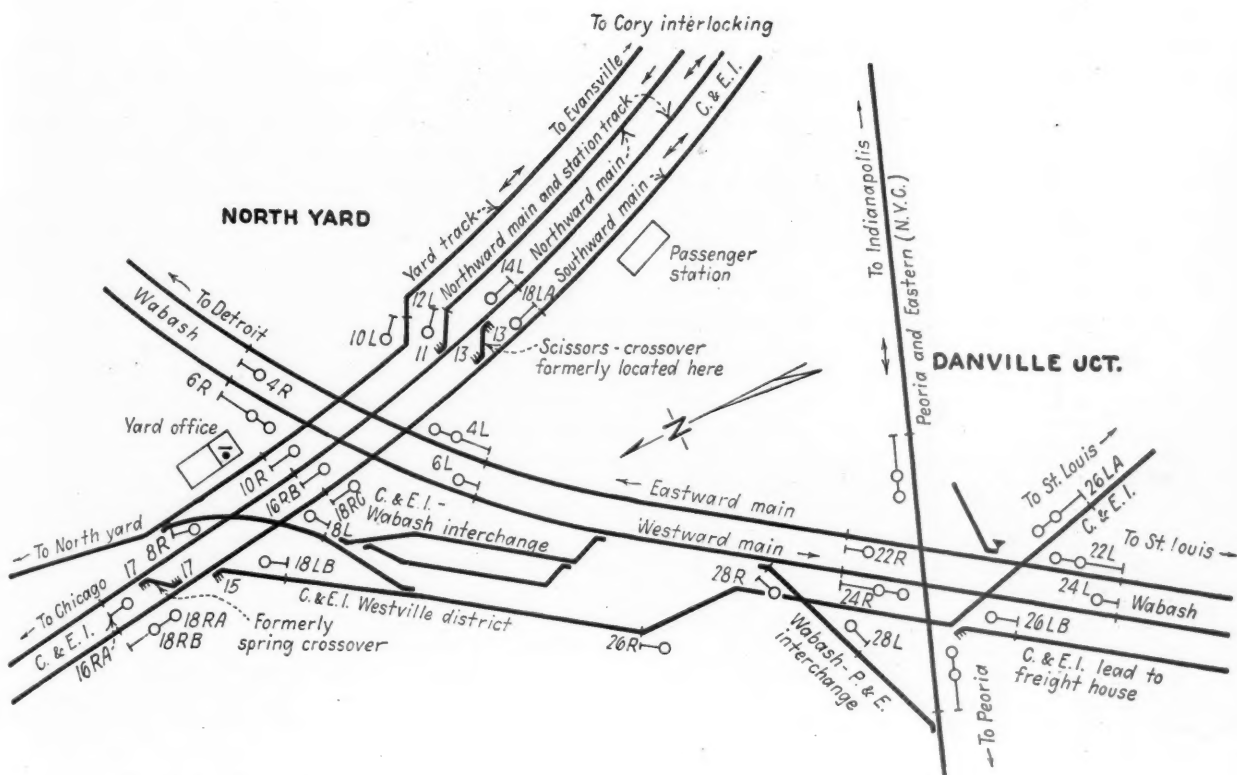
## NEW INTERLOCKING EFFECTS BIG SAVINGS

*Modern signaling facilities on Chicago & Eastern Illinois expedite train movements at complicated crossing with two other railroads*

Elimination of 55,000 train stops annually, relief from serious congestion and delays, and increased flexibility and safety of train movements—these are the results of a new electric interlocking installed by the Chicago & Eastern Illinois at a complicated crossing with the Wabash and Peoria & Eastern (New York Central), in Danville, Ill., 123 mi. south of Chicago. Estimates by the Wabash indicate that 10 min. and ½ ton of coal are being saved by the elimination of each eastbound passenger train stop. Freight trains in the same direc-







Track and signal layout of the new interlocking at Danville, Ill.

Crossover 17 between main tracks on the C. & E. I. at North yard, showing typical electric switch machine



tion save 20 min. and 2 tons of coal. Westward, passenger trains save 8 min. and  $\frac{1}{2}$  ton of coal, while freights in that direction save 10 min. and 1 ton of coal. On the C. & E. I., 3 min. and 10 min. are saved by the elimination of each passenger and freight stop, respectively.

At this new interlocking, the C. & E. I. crosses the Wabash and the P. & E. The P. & E. and a branch line of the C. & E. I., known as the Westville district, also cross the Wabash nearby, forming a triangle of tracks between the three crossings, which are approximately  $\frac{1}{4}$  mi. apart. The location where the main line of the C. & E. I. crosses the Wabash is known as North yard; the crossing between the C. & E. I. main line and the P. & E. is known as Cory; and the location where the P. & E. and C. & E. I. Westville district cross the Wabash is designated Danville Jct. The C. & E. I. main line and the Wabash are double track, and the P. & E. and C. & E. I. Westville district are single-track lines. The North Yard crossing is on a 4-deg. curve on the C. & E. I. and a 2-deg. curve on the Wabash, and the other main-line crossings are tangent. In addition to the main tracks, the layout as a whole is further complicated by numerous yard, interchange and other secondary tracks. The C. & E. I. passenger station is located between Cory and North yard, and is the only station involved in the layout. In addition to the two main tracks between Cory and North yard the C. & E. I. has a station track, as well as a yard track which extends over the Wabash to the west end of North yard.

The new signals are the color-light type, all of which at North yard and at Danville Jct. are controlled from North yard, except the P. & E. signals at the latter location. These are controlled from Cory. This arrangement is used to provide better coordination of train movements and lessen the chances of the plants tying up each other. The new interlocking machine is located in the west end of the North Yard office near the C. & E. I.-Wabash crossing, and is the miniature-lever type.

### **Traffic and Former Protection**

The traffic on the C. & E. I. main line consists of 9 passenger and 5 freight trains in each direction daily. Traffic on the Westville district includes 1 passenger and 2 freight trains in each direction daily. Approximately 25 C. & E. I. switching moves are made through the plant every 24 hr. Traffic on the P. & E. through Cory and Danville Jct. includes 2 passenger and 6 freight trains in each direction, plus numerous switching movements. The traffic on the Wabash consists of 12 to 15 trains in each direction daily, of which 2 in each direction are passenger trains. The Wabash has about 20 switching moves. Thus, about 150 train movements are made daily on the three roads through the plant. The speed limit for all trains on the C. & E. I. between Cory and North yard is 20 m.p.h., while the speed limit on the Wabash and P. & E. is 15 and 20 m.p.h., respectively.

Prior to the installation of the new plant, all trains were required to stop at North yard and Danville Jct. A semaphore crossing signal was in service at North yard, and a tilting-crossbar signal was in service at the Danville Jct. crossing. Train movements at Cory were

controlled from an electro-mechanical plant at the crossing, and this plant was continued in service. A scissors-crossing-over arrangement was in service between C. & E. I. tracks 1 and 2 just south of North yard. These crossovers, as well as others, were hand operated, and train movements over them were governed by semi-automatic signals. As part of the project, the trailing-point crossover was removed. Crossover 17, between the C. & E. I. main tracks, was moved 50 ft. north to remove it from the curve. This crossover was formerly equipped with spring switch mechanisms which were replaced with power switch machines as part of the project. To increase the flexibility of operation through the C. & E. I. station, the two main tracks and station track were signaled for operation in both directions by signal indication.

Eastward there is a 0.6 per cent ascending grade on the Wabash through Danville Jct. and North yard. Similarly, a 0.55 per cent ascending grade extends northward on the C. & E. I. through Cory and North yard. An ascending grade eastward on the P. & E. extends through Cory and Danville Jct. These grades presented a serious operating difficulty, particularly on the Wabash, in getting trains started after a stop.

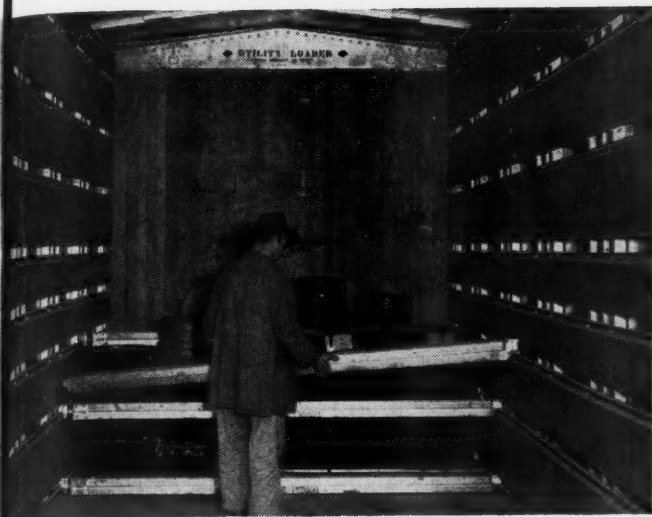
Heavy eastbound tonnage freight trains on the Wabash often stalled when stopping, and required pushers to get them started again. This resulted in a considerable loss of time and the blocking and congestion of trains on the P. & E. and C. & E. I. This, in turn, often tied up highway traffic, since there are several highway grade crossings in the vicinity. These trains now hold back at the distant signal until a green aspect is displayed, so a run can be made for the crossings, thus eliminating stalling due to a stop.

This plant was installed by the regular C. & E. I. signal forces under the jurisdiction of G. P. Neal, superintendent of signals and telegraph. The major items of signaling and interlocking equipment were furnished by the Union Switch & Signal Co.



Stripped-down box cars are used for loading pulpwood and posts in the Southern-pine region





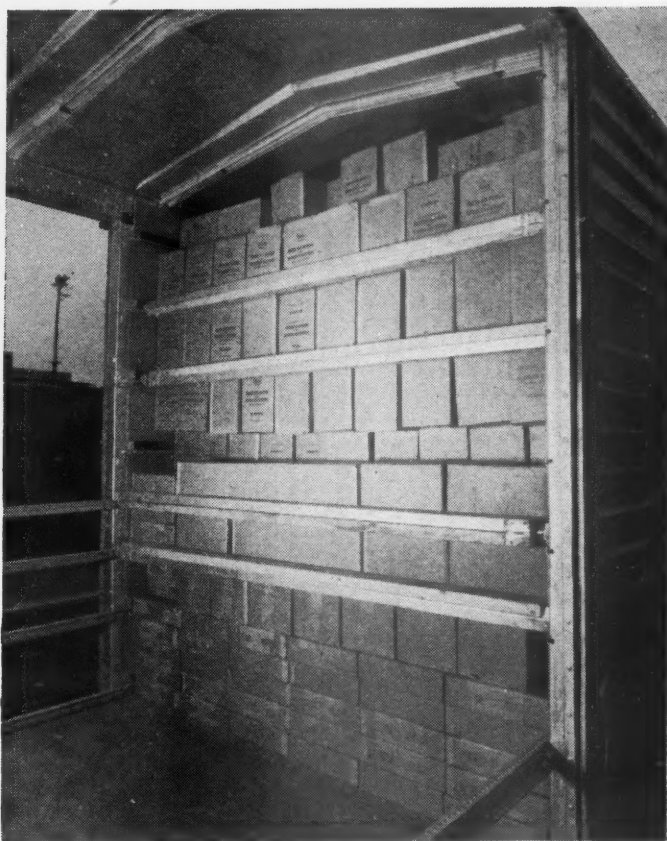
## Application of "Damage-Free" Loader Modernizes Standard Box Car

An adaptation of the Evans Utility Loader, which was applied to 1,500 Navy Department Bureau of Ordnance box cars for the movement of ammunition during the war, has been designed for application to cars in general service. The new equipment, known as the "D/F [damage-free] Loader," differs from the wartime version (discussed in *Railway Age* of January 25, 1947) chiefly in that no special tools or wrenches are required for locking the equipment in position. Its weight and cost are also substantially reduced.

A car equipped with this simplified bracing equipment made a test run in merchandise service from Louisville, Ky., to Chicago over the Chicago, Indianapolis & Louisville early in February. A representative of *Railway Age* was present when freight handlers first opened the car at destination. These workers expressed surprise and delight at the excellent condition of the load, and although they had not previously handled this type of equipment or had any advance instruction concerning it, they proceeded expeditiously with the disassembly of the bracing and the unloading of the freight. There was no evidence of shifting, nor any trace of damage to the lading, which consisted of 22,000 lb. of widely assorted freight, made up mainly of light shipments in cartons, but with a generous mixture of furniture, heavy drums, pitchforks, etc.

Two test cars equipped with the latest type of loader have been assigned principally to auto-parts traffic, and have produced consistently heavy loadings, with virtually no damage due to vertical or longitudinal motion reported. A 55-day check on one of the cars showed 8 revenue runs averaging 894.6 mi. each with an average net load of 52,071 lb.

The "D/F Loader" is an adjustable device consisting of eight horizontal steel angle bars perforated at half-

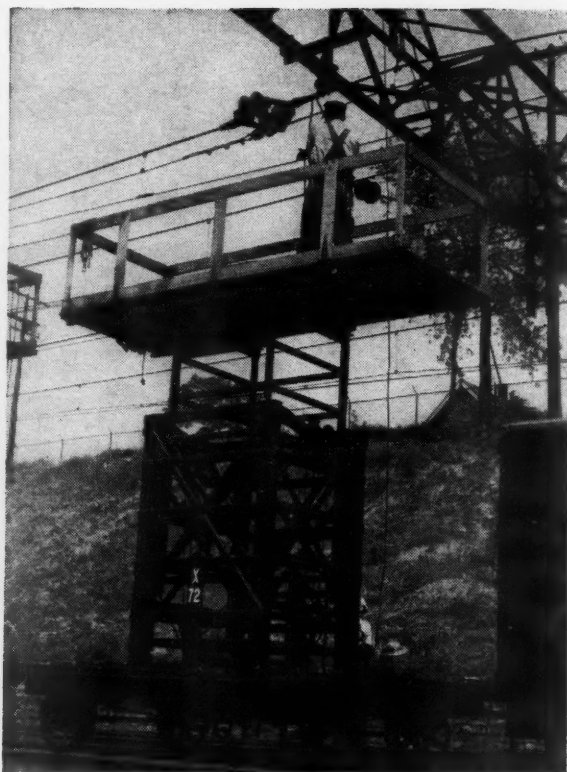
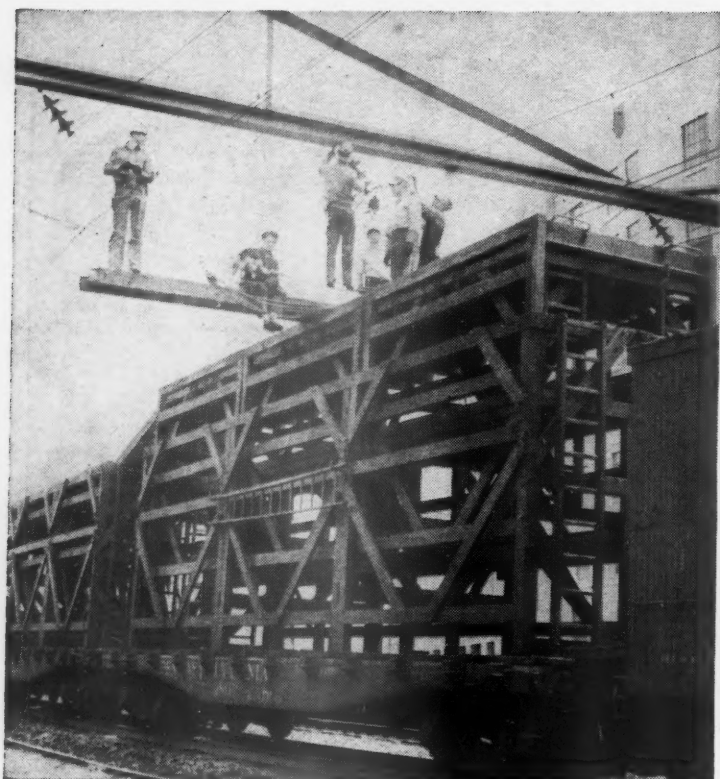


Left—Common freighthouse labor can do superior bracing and blocking in cars equipped with the Evans "D/F Loader." Right—Full cubic capacity of cars can be utilized when proper bracing is afforded

inch intervals, permanently built into the sidewalls of the car from the floor to the ceiling. Steel-and-wood cross-bars, extending the width of the car, are fitted into the perforations at the desired locations on any of the eight levels provided by the horizontal members. They are locked in position by simple finger-operated spring locks. Steel door bars may be extended as projections to the horizontal strips across the door opening. The deck board extended over the cross-bars, may be used to separate loadings into two or more levels. All of the adjustable equipment, when not in use, can be carried on the horizontal angle bars at the top of the car where it is entirely clear of any ordinary lading. The horizontal members are recessed so as to be flush with the wood sides of the car, thus permitting the carriage of freight in bags or sacks without the danger of ripping or tearing. Installation in a standard 40-ft. car weighs 5,300 lb.

The need for dunnage or other forms of bracing is eliminated, and heavier loadings are generally attainable. Because no nails need be driven into the car floor or walls, cleaning time is shortened, and danger of damage to later shipments is minimized.

Forty-five "D/F Loader" cars are on order by the Monon, 25 of which will be 50-ft. cars for assignment to auto-parts traffic. Twenty are 40-ft. cars which are to go into l.c.l. service. Arrangements have been worked out with a connecting line so that the merchandise cars will be in two-way interline service. A total of 90 additional cars equipped with the Evans loaders are on order by a half dozen other railroads.



Cost of the work train (left) may be high, but by reducing it to a miniature (right) costs are also reduced

## DO FIRST COSTS RETARD ELECTRIFICATION?

*Total cost might be reduced from 11 to 14 per cent by improved methods of design and construction procedure applied to the contact system alone*

By **L. W. BIRCH**  
Ohio Brass Company

It cannot be said that the high first cost of electrification is entirely due to the cost of the overhead distribution system. But, any reduction in the first cost of electrification will certainly place the electric locomotive in a more favorable place.

The method for determining the per cent reduction of overhead costs in this paper is based on averages of three estimates. One of the electrifications for which an estimate was made is practically finished. The three estimates include a large industrial 3,000-volt d.c. project; a long, wood-pole, single-track 11-kv. western railroad project and a large eastern multiple-track project. The increase in costs of electrification over Dieselization were found to be 0 per cent, 16 per cent and 37 per cent in the order named. The cost of the distribution system, based on the total cost of electrification, was found to be 26 per cent, 27 per cent and 28 per cent in the order named, an average of 27 per cent. It is the purpose of this paper to show how this 27 per cent factor can be reduced.

This article is a summary of a paper presented at the winter meeting of the American Institute of Electrical Engineers, held in Pittsburgh, Pa., January 26-30, 1948.

The industrial project estimate showed no savings in first cost for the Diesel, the western road showed 16 per cent and the eastern road 37 per cent. An average of these percentages, 18 per cent, should be satisfactory for our example. By simple arithmetic, an 18 per cent increase in first cost requires a 15 per cent reduction, if first costs are to be equated. If operating costs are to be considered, this drastic first-cost reduction may not be necessary to equalize total costs.

If overhead distribution costs alone can be reduced by this amount, we may conclude quite definitely that they will not greatly retard electrification.

Studies which have been made by a committee of manufacturers and fabricators show that the work train used to build the distribution system accounts for a large part of the labor costs. Lack of standardization is another factor. These studies were not restricted to materials alone, but involved considerable construction study, particularly from the standpoint of off-track equipment. It was recognized by the committee that work-train cost has always accounted for a huge portion of the total labor costs. Again, it was found



that many steel structures had been designed "on the heavy side."

The committee also found a wide variation in the selection of hardware. The committee believed that engineering costs were too high on many electrifications. One prevalent cause for high engineering costs was the vast amount of steel structure detailing by the electrification engineers. After all, the fabricator duplicates this work.

### Standard Costs

These costs include all labor and material costs for the structure, the catenary system, transmission line and track bonds. They do not include the cost of engineering, inspection, signal changes and alterations to wayside structures.

Although two electrified systems may be identical, the structures are apt to be different. Costs of material and labor, at the time of construction, greatly affect design.

Four cost comparisons of two-track structures may serve to illustrate the problem of structure economy. The figures in Table I provide for structures spaced 300 ft. apart and carry a catenary system of 3 lb. per ft. These figures include only structure items and not any portion of the distribution system.

**Table I**  
**Summary of Costs of Two-Track Structures for 300 Ft. of Electrification**

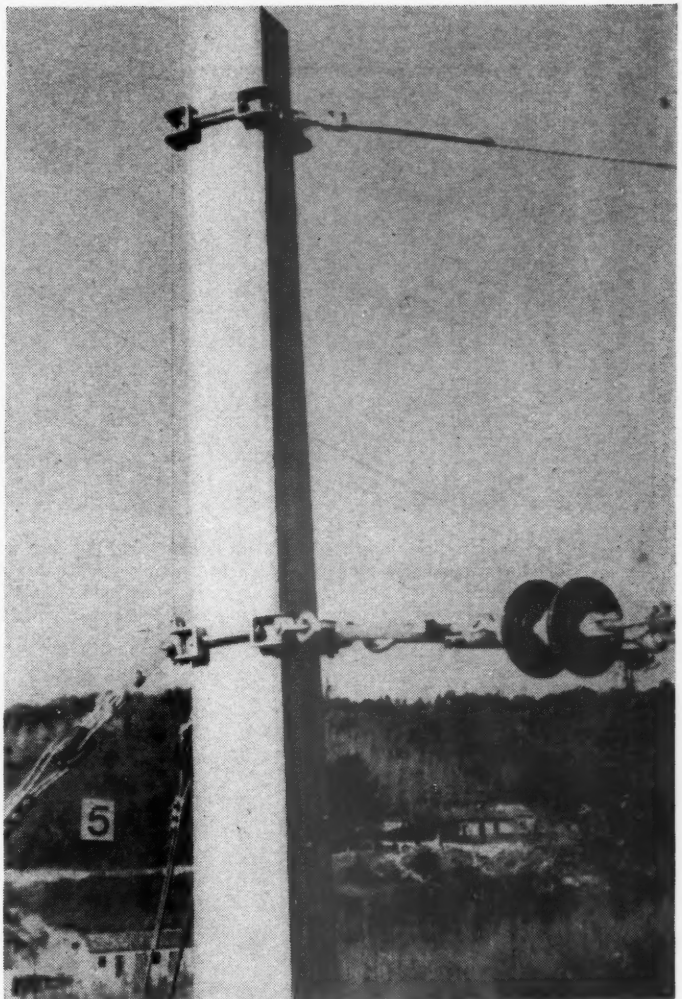
|   | Steel Portal | Steel X-span | Steel Bracket | Wood X-span |
|---|--------------|--------------|---------------|-------------|
| For steel at 5¢ per lb. ....                                    | \$ 870       | \$ 965       | \$ 910        | \$ 890      |
| For steel at 7¢ per lb. ....                                    | 1,030        | 1,065        | 1,030         | 890         |
| Cost of concrete and excavation (\$5 per yd.) .....             | 1,080        | 1,125        | 1,100         | 890         |
| Labor including increase by 50 per cent during past 2 yrs. .... | 1,140        | 1,180        | 1,160         | 1,025       |

The handling cost of structures may be greatly reduced by the elimination of a certain amount of storage or warehousing. It is frequently possible to erect a structure direct from the railroad car on which it was shipped. The cost of steel can be greatly reduced by the choice of fabrication. Briefly, structures built with H-sections (wide flange or CB) reduce cost, while structures fabricated with corner angles and lacing increase costs.

In general, structure cost can be reduced by securing the material within a reasonable distance of the point of application. This is certainly true for wood. Another means of reducing structure costs is to eliminate as much field work as possible. As much fabricating as is consistent should be accomplished in the plant of the builder.

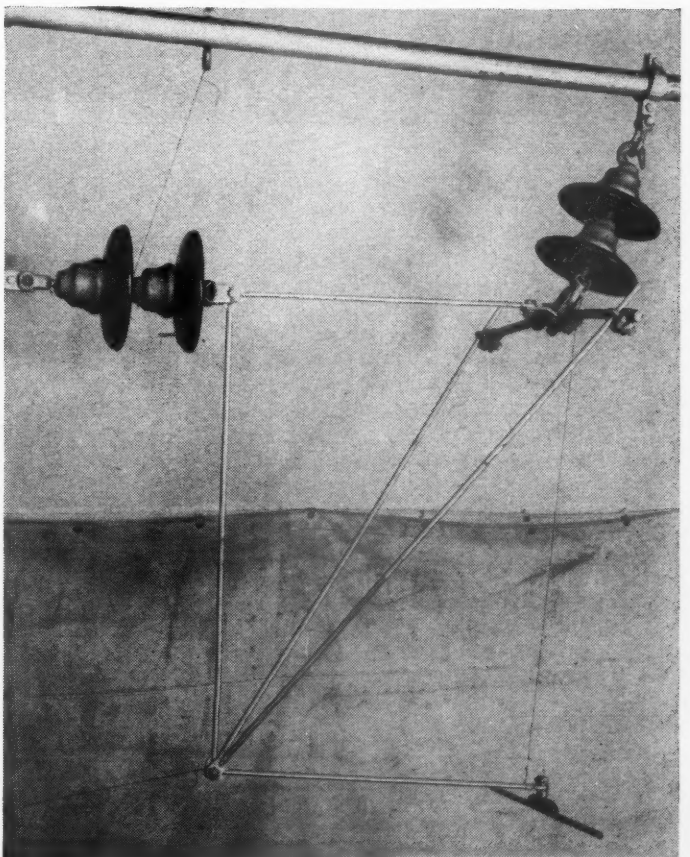
Off-track equipment can be used extensively since most railroads are built over sufficient flat country to permit its use on 40 to 85 per cent of the territory. A work train can seldom function more than two or three hours during an eight-hour shift.

Excavations for steel structures may be broad and shallow or narrow and deep. This depends on the structure type, whether pin-end or fixed columns are to be erected. The fixed type requiring a side bearing footing necessitates a comparatively deep excavation while the pin-end structure can be set on a shallow



Above—Cast attachments on concrete pole for spans and guys

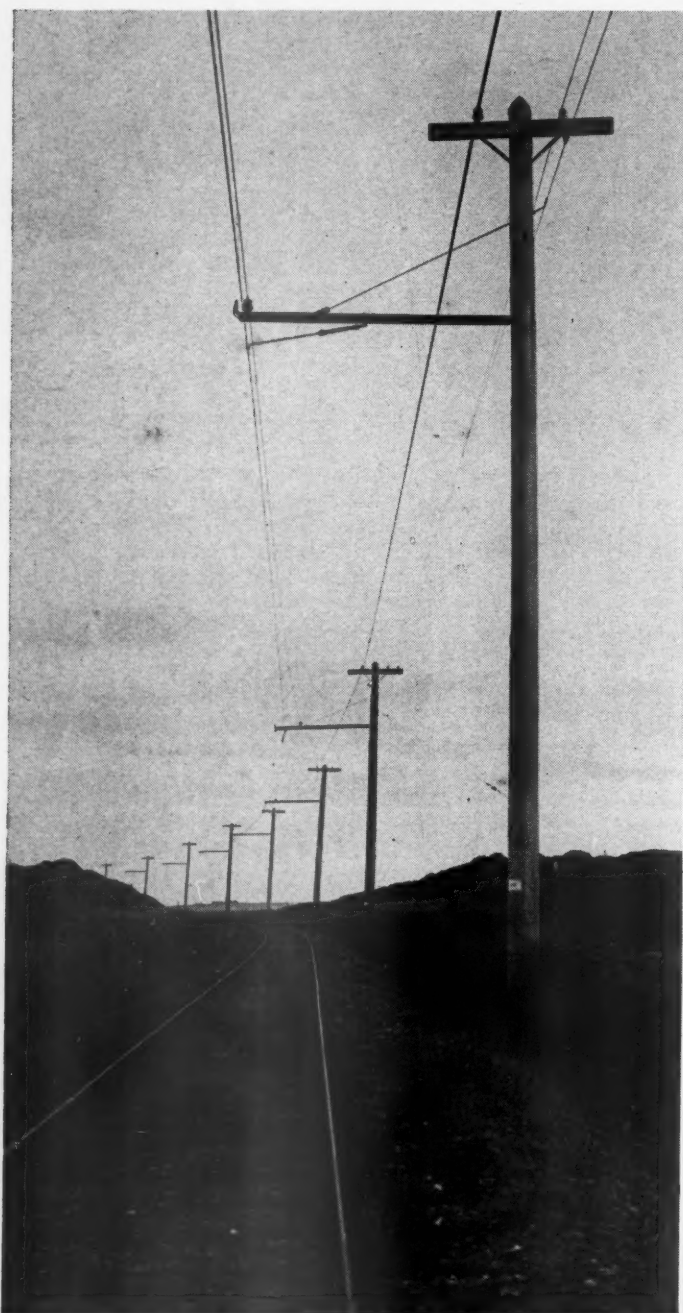
Below—A simplified steady design







The shallow hole for the foundation (above) can be dug with off-track equipment while the deep hole requires hand digging. To reduce field labor, brackets, cross arms and insulators (below) may be attached to the pole and the entire structure erected as a unit



flat footing, eliminating the necessity of digging a deep hole, possibly in a fill consisting of broken rock. For concrete supply, a ready-mix plant may be located at intervals of five, ten or twenty miles along the electrification.

Heretofore, most attachments to steel structures have been made with fabricated shapes usually manufactured by the structural steel company. For permanent locations on the structures, this method of attachment is quite satisfactory, although there is always the necessity for adjustment and alinement. Clamped attachments for the support of insulator strings, pulloffs and steadies provide a means of adjusting these assemblies. If the assemblies can be quickly adjusted to their final position, there is a saving in field labor.

For a number of years, the trend in catenary span design has been towards an auxiliary cable suspended from the main messenger cable. The contact wires are supported from the auxiliary cable. Recent observations on several installations apparently indicate that some of the simpler catenary designs are preferable. These include the simple catenary span with the single, large contact wire, also the modified simple catenary span supporting equi-length sub-spans.

A considerable saving is possible by limiting the work train to the stringing of messengers and cables. The attachment of the catenary hangers, messenger sleeves and duplex clips can be accomplished by a two-man crew, one man sitting in a bos'n seat while the other man is a ground attendant. New pulloff designs have simplified and reduced the cost of these devices.

Improvements in steady design have also reduced cost. For the a.c. electrifications, such as 11 kv., American practice has proven that the light head-of-the-rail signal bond is ample. The cost of bonding for this type of installation is approximately half the cost of the equivalent welded bond.

Our western roads have found wood structures to be economical because maintenance and replacement costs have been comparatively low. The reverse is true in the east.

### Clearances

The second main subject pertinent to cost reduction is clearances. Although the operating department of a railroad usually demands a high wire in all locations, there are many exceptions caused by bridges, tunnels and other restrictions where physical limitations existed prior to the electrification study. In some respects this practice seems redundant. It is not good practice to permit trainmen on the top of trains where high voltage wires are suspended above their heads, except of course in an emergency. Therefore, the lowering of the overhead system to permit a contact wire height of 20 ft., except at highway crossings, cannot be too serious and a decided saving in structure costs is possible. The contact wire height on the catenary system of the Cleveland Union Terminals is 19 ft.

One method proposed for the maintenance of a high overhead clearance, and at the same time reduction of costs, is to offset the catenary system from center line of track. This scheme of "have your cake and eat it too" provides steel structure clearance over the track of 22 or 24 ft. since the catenary system is off-

set to the right or left. The contact wire is lowered to an elevation of 19 or 20 ft. Although this method of construction may require a redesign of the collection equipment, the anticipated savings seem to be sufficient to warrant the cost of development of a new collector. For single- or double-track installations it may be possible to secure attractive savings in structure costs due to lower positions of mechanical loads.

### Psychological Barriers

The third main subject relative to cost reduction is psychological barriers.

All engineers work against a certain barrier when starting a large project. The effect of the barrier is usually evidenced in the planning of the engineering work and represents, to a certain extent, the "unfamiliar" phase of design. As a result, the planning or engineering department is apt to "play safe" wherever possible. One place where the engineering departments for steam road electrifications have been playing safe is in steel design.

It is the task of the railway's engineering department to select the general design of structure and to locate the structure advantageously along the right-of-way. If economics are to be considered, it is not the task of the engineering department to design the structure. Many electrifications have cost too much because of too much engineering. In the case of the steel structure, many railroad engineering departments have completely detailed every column, every truss, every knee brace and then, after submitting the designs to the fabricator, the fabricator has redesigned every structure. This duplication of work is costly. The real answer is, "let the fabricator detail the steel, he will do it anyway." It has been estimated that as much as 3 per cent of the total cost of an installation can be saved by eliminating duplication of design.

### Future Considerations

The following is a list of the more important factors which can be controlled to reduce the cost of future railroad electrifications:

A shallow footing for structures suggests a means of saving cost by permitting the use of mechanical digging equipment.

A centralized concrete plant offers certain savings over the concrete train as evidenced by its use on many expressway installations.

Off-track equipment saves work train cost.

Some off-track equipment may be of the re-rail type that will permit the vehicle to operate on either rail or ground.

Many overhead construction operations, such as wood-pole settings, can be accomplished with a ground crew thus saving work train cost.

Small gas-driven cars, also small cars with staging drawn by the gas-propelled car, can be employed for many construction operations.

It is possible that a wider pantograph may reduce costs by permitting greater offset of the contact system at points of pulloff.

If the operating department of the railroad requires a 22-ft. clearance between track and overhead, it is possible with the aid of a different type of collector to offset the catenary span from the center of track and erect the steel truss to just clear the 22-ft. requirement.

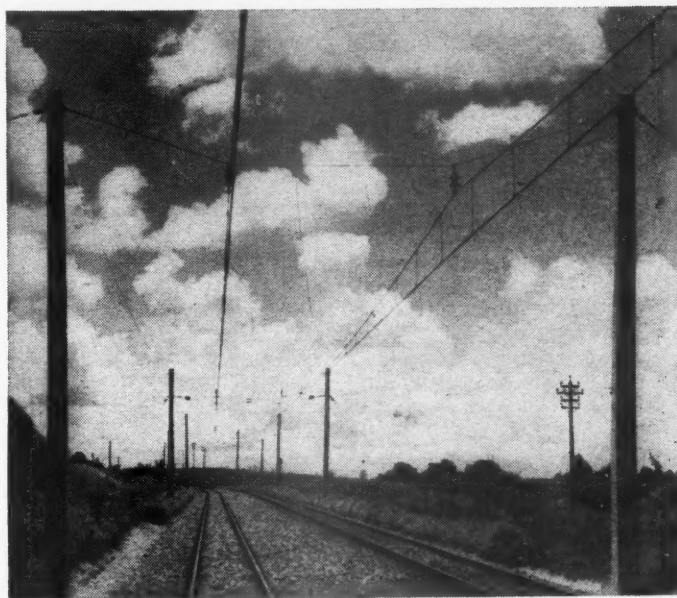
Higher contact wire voltages reduce the amount of copper in the overhead system.

Head-of-rail bonding with the small pintype signal bonds

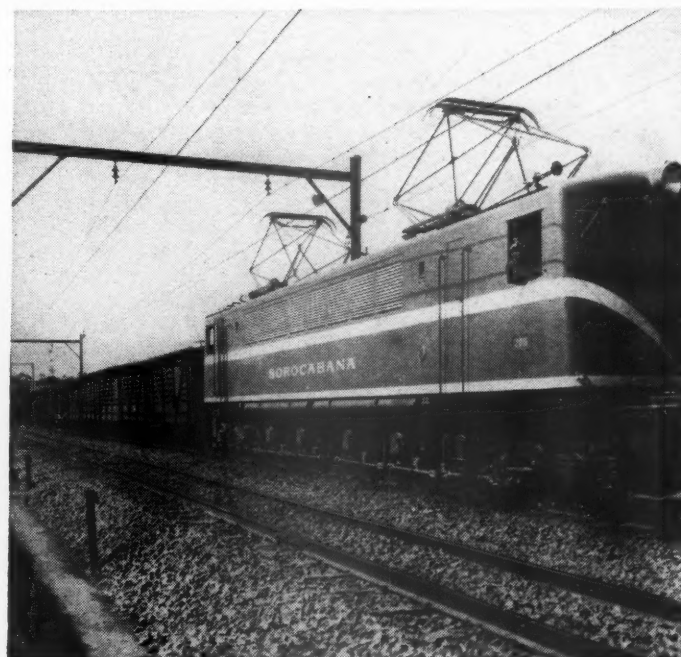
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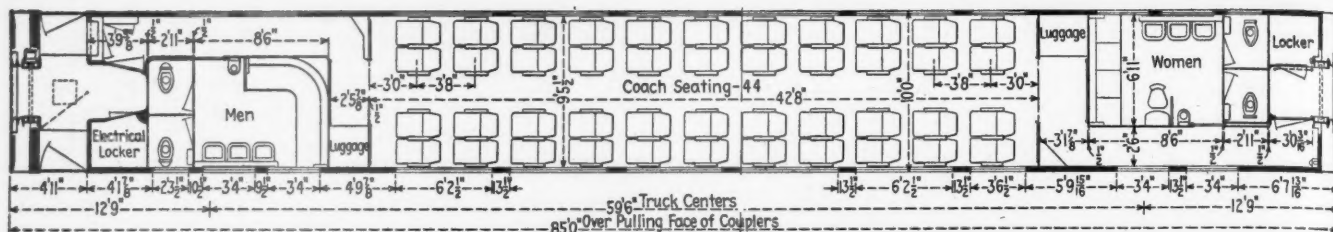
Contact wire height 19 ft.—Cleveland Union Terminal



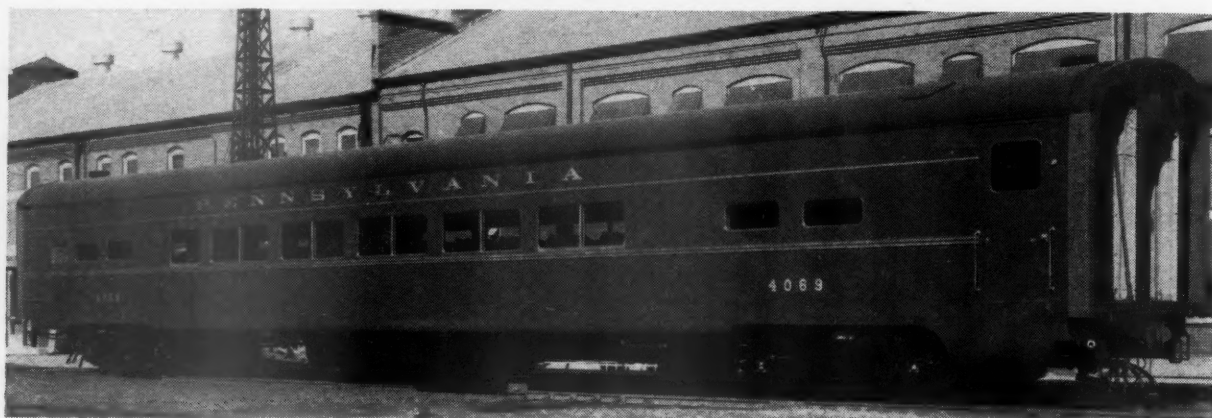
Simple catenary span (above) with two contact wires. Below —Simple portal type of overhead construction used on the Sorocabana Railroad in Brazil







Above—Floor plan arrangement of the new coach (below)



## PENNSYLVANIA'S OVERNIGHT COACHES

*Twenty-one 44-passenger cars built by the American Car & Foundry Co. are the latest additions to New York-Chicago and New York-Washington-St. Louis coach service*

Reclining seats with more space per passenger, a new air-conditioning arrangement utilizing baggage-rack exhaust ducts, divided panorama-type windows and end mirrors are features of the car interior





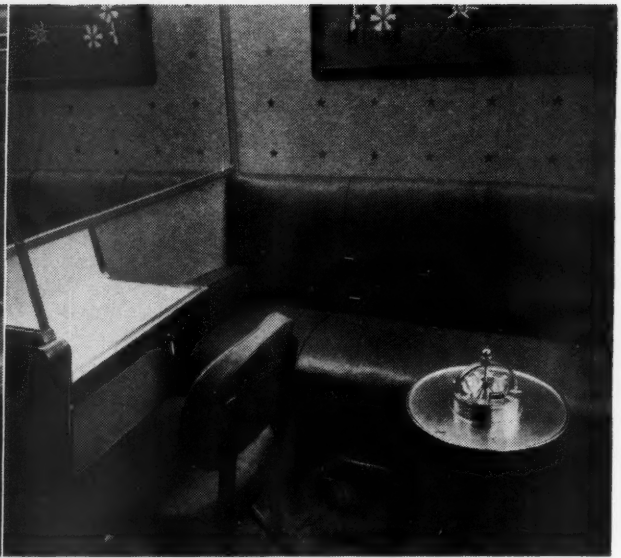
Twenty-one coaches for the New York-Chicago and New York-Washington-St. Louis overnight coach trains of the Pennsylvania have been delivered by the American Car & Foundry Co. from its Berwick, Pa., plant. The cars are a part of a total of 114 cars of various types already built or under construction for the "Trail Blazer" and the "Jeffersonian." Except for minor structural changes, they are identical in design to the coaches constructed in the railroad's

Altoona shops that were described briefly in the January 4, 1947, issue of *Railway Age*. The coaches were designed by the Pennsylvania's engineers and styled by Raymond Loewy Associates.

The cars were designed, styled and furnished with the particular requirements for the comfort of overnight coach travelers in mind. Several features contribute to this objective. One is the greater space per passenger as compared with older equipment. The

#### Partial List of Materials and Equipment on the Pennsylvania Coaches built by the American Car & Foundry Co.

|                           |  |                           |   |
|---------------------------|--|---------------------------|---|
| Steel, manganese          | Crucible Steel Co. of America, New York                      | Generator drive, axle     | Spicer Mfg. Corp., Toledo, Ohio   |
|                           | Manganese Steel Forge Co., Philadelphia, Pa.                 | Receptacles, stand-by     | Pyle-National Company, Chicago  |
| Aluminum extrusions       | Aluminum Co. of America, Pittsburgh, Pa.                     | Storage batteries         | Edison Storage Battery Div., Thomas A. Edison, Inc., West Orange, N. J.   |
|                           | Bohn Aluminum & Brass Corp., Detroit, Mich.                  | Fixtures, electric light; |   |
|                           | Revere Copper & Brass, Inc., New York                        | end-light signs           | Electric Service Mfg. Co., Philadelphia, Pa.                              |
|                           | Reynolds Metals Co., Aluminum Division, Louisville, Ky.      | Electric bulbs, Mazda     |   |
| Aluminum sheets and       |  | and fluorescent           | General Electric Company, Schenectady, N. Y.                              |
| castings                  | Aluminum Co. of America, Pittsburgh, Pa.                     |                           |   |
| Axles                     | Carnegie-Illinois Steel Corp., Pittsburgh, Pa.               | Lamp regulators           | Sylvania Electric Products, Salem, Mass.                                  |
| Truck frames              | General Steel Castings Corp., Eddystone, Pa.                 |                           | Safety Car Heating & Lighting Co., New York                               |
| Springs                   | American Locomotive Co., Railway Steel Spring Div., New York | Marker lights             | Lovell-Dressel Co., Arlington, N. J.                                      |
| Wheels                    | American Rolling Mill Co., Middletown, Ohio                  | Fittings, electrical      | Thomas & Betts Co., Elizabeth, N. J.                                      |
|                           | Edgewater Steel Co., Pittsburgh, Pa.                         | Electrical equipment,     |   |
| Roller bearing wheel      |  | miscellaneous             | Crannell, Nugent & Kranzer, Inc., New York                                |
| units                     | Hyatt Bearings Div., General Motors Corp., Harrison, N. J.   | Cable, wire               | General Cable Corp., New York   |
| Center pins, self-lock-   |  | Radio                     | General Electric Company, Schenectady, N. Y.                              |
| ing                       | W. H. Miner, Inc., Chicago                                   | Equipment, public-ad-     |   |
| Draft gear, Twin-Cush-    |  | dress system              | Raymond Rosen Company, Philadelphia, Pa.                                  |
| ion                       | Waugh Equipment Co., New York                                | Radio antenna             | American Phenolic Corp., Chicago  |
| Draft-gear pocket filler; |  | Radio connection          | National Malleable & Steel Castings Co., Cleveland, Ohio                  |
| couplers, coupler         |  |                           |   |
| yokes with radial         |  | Trainline fittings, pub-  |   |
| connection; uncoup-       |  | lic-address system        | Mines Equipment Co., St. Louis, Mo.                                       |
| ling device               | National Malleable & Steel Castings Co., Cleveland, Ohio     | Air conditioning          | Frigidaire Div., General Motors Corp., Dayton, Ohio                       |
| Buffers, upper, Fowler    | Standard Railway Equipment Mfg. Co., Hammond, Ind.           | Steam-heat equipment      |   |
| Cushion pads, buffer      |  | and controls              | Fulton-Sylphon Co., Knoxville, Tenn.                                      |
| stem wear plate           | Fabreeka Products Co., Boston, Mass.                         | Fans, booster and ex-     |   |
| Diaphragms, outside       |  | haust                     | American Blower Corp., Detroit, Mich.                                     |
| and vestibule, and        |  | Ventilators, exhaust      | Penn Ventilating Co., Philadelphia, Pa.                                   |
| diaphragm curtains        | Morton Mfg. Co., Chicago                                     |                           | Railway Utility Co., Chicago  |
| Floor sheets, vestibule,  |  | Panels, air filter        | Air-Maze Corp., Cleveland, Ohio   |
| stainless steel           | Carnegie-Illinois Steel Corp., Pittsburgh, Pa.               | Heater guards             | Harrington & King Perforating Co., Chicago                                |
| Trapdoors and folding     |  | Steam hose connections    | Vapor Car Heating Co., Chicago  |
| steps; door frame         |  | Panels, multi-vent        | Pyle National Company, Chicago  |
| glass assembly; ves-      |  | Grills, air               | Barber-Colman Company, Rockford, Ill.                                     |
| tibule side door          | O. M. Edwards Co., Syracuse, N. Y.                           | Air brakes; decelostat    |   |
| Drop panel assembly,      |  | equipment                 | Westinghouse Air Brake Co., Wilmerding, Pa.                               |
| vestibule ceiling         | Barber-Colman Co., Rockford, Ill.                            | Clasp brakes              | American Steel Foundries, Chicago   |
| Insulation:               |  | Brake shoes               | American Brake Shoe Co., New York   |
| Body                      | Gustin-Bacon Mfg. Co., Kansas City, Mo.                      | Receptacle, brake line,   |   |
| Pipe                      | Johns-Manville Sales Corp., New York                         | electric                  | Pyle-National Company, Chicago  |
| Seats, coach and lounge   | Transportation Seat Company, Chicago                         | Hand brakes               | National Brake Company, New York  |
| Mohair, coach-seat        | Massachusetts Mohair Plush Co., Boston, Mass.                | Water raising equip-      |   |
|                           | Shelton Looms, New York                                      | ment                      | Westinghouse Air Brake Co., Wilmerding, Pa.                               |
| Baggage racks             | Sidney Blumenthal & Co., New York                            | Operators, end door       | National Pneumatic Co., Rahway, N. J.                                     |
|                           | Adams & Westlake Co., Elkhart, Ind.                          | Locks, end door           | Dayton Mfg. Co., Dayton, Ohio   |
|                           | Moynahan Bronze Co., Detroit, Mich.                          | Locks, side door, vesti-  |   |
| Plywood and Plymetl.      | Haskelite Mfg. Corp., Chicago                                | bule                      | H. S. Getty & Co., Philadelphia, Pa.                                      |
| Tempered Presdwood        | Masonite Corp., Chicago                                      |                           | George B. Henne Co., Philadelphia, Pa.                                    |
| Sash, window              | Adams & Westlake Co., Elkhart, Ind.                          | Door closers              | Corbin Cabinet Lock Div., American Hardware Co., New Britain, Conn.       |
| Linoleum                  | Armstrong Cork Company, Lancaster, Pa.                       | Smoking stands            | Marshall Field & Co., Chicago   |
| Composition flooring      | Acme Asbestos Covering & Flooring Co., Chicago               | Soap dispensers           | West Disinfecting Co., Long Island City, N. Y.                            |
| Cement, adhesive rub-     |  | Water coolers             | Westinghouse Electric Corp., Pittsburgh, Pa.                              |
| ber                       | Presstite Engineering Co., St. Louis, Mo.                    | Drinking-cup dispens-     |   |
| Moldings, snap-on         | R. W. Preikschat Co., Chicago                                | ers                       | Dixie Cup Co., Chicago  |
| Molding, steel, special   |  | Towel dispensers          | Scott Paper Co., Chester, Pa.   |
| drawn                     | Dahlstrom Metallic Door Co., Jamestown, N. Y.                | Toilet paper holders      | Adams & Westlake Co., Elkhart, Ind.                                       |
| Curtains and fixtures,    |  |                           | Scott Paper Co., Chester, Pa.   |
| window                    | Adams & Westlake Co., Elkhart, Ind.                          | Plumbing fixtures         | Crane Co., Chicago  |
| Material, fire-retarding  | Flamepruf Chemical Co., New York                             | Hoppers                   | Duner Co., Chicago  |
| Fabric, seal              | Tuco Products Co., New York                                  | Materials, miscellane-    |   |
| Mirrors                   | Pittsburgh Plate Glass Co., Pittsburgh, Pa.                  | ous rubber                | Atlantic India Rubber Works, Inc., Chicago                                |
|                           | Semon Bache & Co., New York                                  |                           | B. F. Goodrich Co., Akron, Ohio   |
|                           | Waterhouse Company, Webster, Mass.                           |                           | Manhattan Rubber Mfg. Div. of Raybestos-Manhattan, Inc., Stratford, Conn. |
| Tiles and frames,         |  |                           | Quaker Rubber Corp., Philadelphia, Pa.                                    |
| ceramic                   | G. E. Walter & Sons, New York                                |                           | Stalwart Rubber Co., Bedford, Ohio  |
| Panels, decorative        | Louis Ross, New York   | Pipe and fittings, mis-   |   |
| Frames and panels,        |  | cellaneous                | Chase Brass & Copper Co., Waterbury, Conn.                                |
| picture                   | G. K. Nastassi, New York                                     | Bronze bushings, Oil-     |   |
|                           | New York Wood Working Corp., Flushing, N. Y.                 | ite, and washers          | Chrysler Corp., Amplex Division, Detroit, Mich.                           |
| Decalcomanias             | Tatem Co., Hillsdale, N. J.                                  | Name plates, miscel-      |   |
| Glass, miscellaneous      |  | laneous                   | Chandler Co., Hartford, Conn.   |
| sheet                     | Pittsburgh Plate Glass Co., Pittsburgh, Pa.                  | Head screws, cross-       |   |
|                           | Semon Bache & Co., New York                                  | slotted, miscellaneous    | Reed & Prince Mfg. Co., Worcester, Mass.                                  |
| Generator equipment,      |  | Castings, brass, miscel-  |   |
| booster inverter          | General Electric Company, Schenectady, N. Y.                 | laneous                   | Lloyd & Scott Co., Wilmington, Del.                                       |



**Above Left**—Reflected in the mirror over the sofa in the men's lounge can be seen the three wash basins and the entrance doors to the two toilets. **Above Right**—The sofa and vanity in the women's lounge

cars are 5 ft. longer, being 85 ft. in length over the pulling faces of the couplers. The seating capacity has been reduced from 56 to 44 passengers, with the seats spaced on 44-in. centers.

With the greater length and fewer seats the men's and women's lounges have been made more spacious. Both are 6 ft. 11 in. wide and 11 ft. 5 in. long. Each lounge is furnished with two toilets, three wash basins and a dental bowl. The women's lounge also has a vanity and a sofa across one end. The sofa in the

men's lounge extends across one end and curves around a corner to occupy about half of one side of the room.

In boarding the train the passengers step into a vestibule located at one end of the car. Entrance to the interior is through a door at one side of a recessed entryway which opens directly into a side aisle leading to the main passenger section. A similar recessed entrance with a side door is built into the other end of the car. Both doors are opened by National Pneumatic Company's end-door openers when a horizontal

**Below Left**—The drinking-water cooler in the passageway along the side of the women's lounge. **Below Right**—There is a luggage compartment at each end of the car





bar on the outside is nudged or a pull-up handle on the inside is moved.

The air conditioning utilizes the enclosed baggage rack interiors as air ducts. Vitiated air is drawn into two separate ducts covered with perforated panels in each baggage rack. The air taken into the ducts nearest the car side is exhausted by a  $\frac{1}{8}$ -hp. fan to the atmosphere. In the summer the upward movement of cool air over the car side picks up heat prior to its discharge. This air flow has a tendency to produce greater passenger comfort as less heat is radiated from the car sides to the interior. The ducts nearest the aisle deliver vitiated air to a plenum chamber by means of two  $\frac{1}{8}$ -hp. booster fans. There it is mixed with fresh air, cooled, dehumidified, and delivered by a 1-hp. fan to an overhead center duct with multi-vent panels. A 12-in. exhaust fan is installed in the men's lounge and an 8-in. exhaust fan ventilates the electrical control locker. Cooling for conditioned air is furnished by a Frigidaire electro-mechanical modulating-type system of eight tons capacity. Fulton-Sylphon steam heat equipment with fin radiation and thermostatic control is installed.

Natural illumination is furnished by sunlight admitted through panorama-type windows six feet wide. A narrow center strip divides the window and two shades permit individual regulation of the light admitted through each half. The window glass is heat resistant and shatter proof.

Artificial lighting for reading is produced by continuous fluorescent lights running along the underside of the baggage racks which produce about 27 foot-candles of illumination at the reading plane. General illumination is supplied by reflected light from continuous fluorescent fixtures installed over the baggage

racks. Fluorescent lights in the lounges are located in coves extending around the room over the mirrors and sofas. Night lights and emergency lights are located at the seat bases.

The seats are the P.R.R. standard reclining type with an upholstered folding center arm. They are reversed by rotation on their bases.

Station and dining-car announcements are made over a built-in public address system. This system is also used for paging service and musical programs. These are provided by a radio operated by an attendant.

The electric power for each car is supplied by a General Electric axle-driven motor-generator set. The generator is rated 186 to 256 amp. and the motor 25 hp. The generator drive is a Spicer Model 6-1 with a 2.54-to-1 gear ratio. The car is equipped with a 450 amp.-hr., 90-cell, A-12-H Edison storage battery. Three-phase a.c. power is supplied through a 5-kw., 220-volt amplidyne inverter.

A Westinghouse electro-mechanical water cooler and a Dixie cup dispenser are mounted in the passageway next to the women's lounge at the entrance to the main passenger section.

Most of the inside is finished with aluminum sheets and extrusions. The exceptions are the stainless-steel sheets for the wainscoting and pier panels in the lounges and Plymetl for the ceilings beyond the bulkheads in both ends and for the partitions.

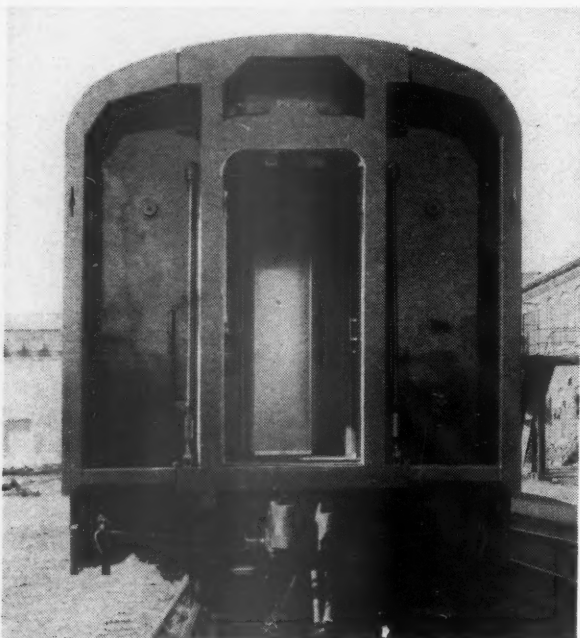
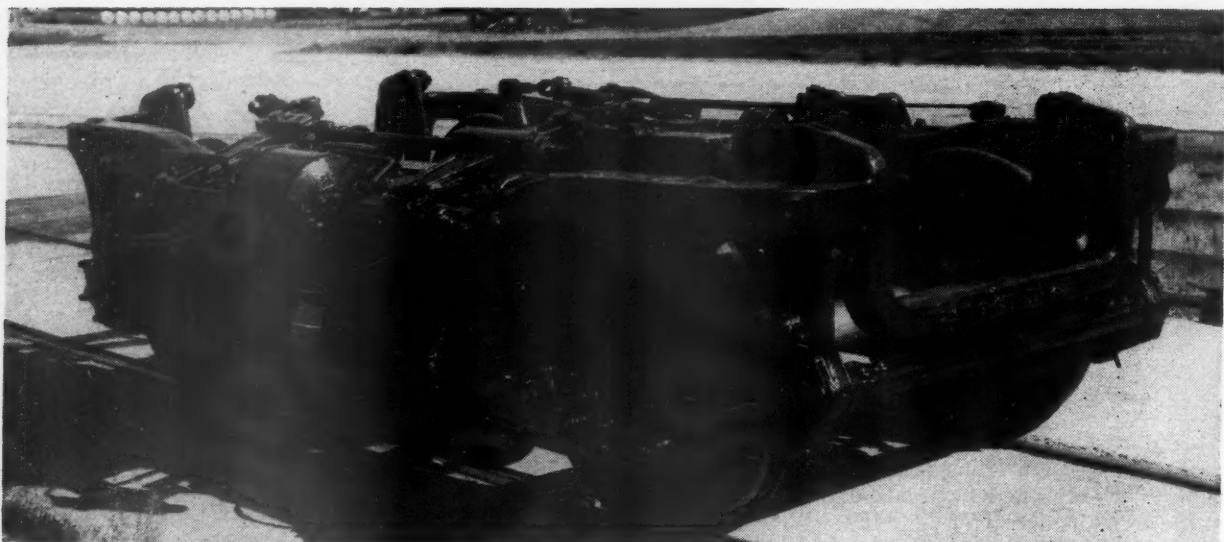
Red, blue and green seat fabrics are used in the cars and the upholstery determines the general color-scheme. Each of the three schemes is used in seven cars.

The ceilings in all the cars are a light sea blue and the baggage racks are white. The bulkheads and pier panels in the main passenger section and the window

**Below Left**—Each lounge has two toilet compartments. **Below Right**—The entrance door in the recessed entryway is pneumatically operated when the horizontal bar is nudged







Above—The four-wheel truck. Left—Stub end of the car showing recessed entryway

walls in the passageways are a light stone gray. All metal trim has a buffed finish of anodized aluminum and the seat end-castings and baggage-rack nosing are of brushed aluminum. Heater guards are of stainless steel.

In the cars with the blue and the red upholstery the window shades are a striped rose; they are a waterfall green in the cars with green upholstery. In the cars with the blue scheme the walls and ceilings of the passageways are in a plum color. The red and green schemes have these surfaces in a mountain blue.

Full-length mirrors are fitted in the walls at both ends of the center aisle and decorative mirrors are used on the bulkheads at each side of the center aisle. A "No Smoking" sign, visible only when lighted, is incorporated in one of the decorative mirrors at each end of the car.

Both the women's and men's lounges have ceilings

in white. In the women's lounge sky blue is used for the walls and the entrance door; a tan enamel is applied in the men's lounge. All seat upholstery in both lounges is leather.

The exterior of the cars is painted tuscan red and is decorated with three longitudinal gold stripes on each side.

### Car Structure

The basic material used in the car frame and car body is low-alloy high-strength steel. The center sill is made of two A.A.R. Z-26 shapes the top flanges of which are joined by continuous welding. The side sills are 8.2-lb. zeos with 2½-in. by 2½-in. by ¼-in. reinforcing angles. Built-up welded bolsters with cast-steel center fillers are used. The crossbearers are also a built-up welded design. Gusset plates at the center sill will resist any quartering impacts resulting from accidents. The crossties are ¾-in. pressed channels.

In the side frames 13-gage Z-pressings are used for the side posts and ¼-in. pressed angles are welded together to form a box construction for the corner posts.

The side plate is a 6.7-lb. zee to which a 3½-in. by 2½-in. by ⅝-in. angle is riveted. Two 10-lb. car-building sections welded together form the belt rail to which a 4-in. special section is riveted over the side sheets.

In the end frames the diaphragm posts are 27-lb. I-beams reinforced with ¼-in. plate; the intermediate posts are 7-gage pressed zeos, and the vestibule corner posts are of welded box construction formed by ¼-in. pressed angles.

At the vestibule end a ⅝-in. U-pressing is used for the body end sill. At each end sill is a CBJ-6 joist welded to a ⅝-in. U-pressing. The buffer beam is a ⅝-in. low-alloy high-strength steel plate with a 4-in. reinforcement.

All side and end sheathing is of a .08-in. low-alloy

high-strength steel. The sheets are fastened to the side frame and to each other by welding. The skirting is of 16-gage steel 9 $\frac{1}{16}$ -in. deep. It is built with hinged access doors for servicing the equipment underneath the cars.

The roof has an A.A.R. arched contour. The end carlines are 13-gage pressed zeos; the intermediate ones are 14-gage pressed U-sections. At the bulkhead and transom sheets they are pressed angles. The purlines are 16-gage pressed zeos at the center and outside and 7-gage U-pressings between. The roof frame is covered with 16-gage low-alloy high-strength steel sheets that are fastened to the framing by submerged arc welding.

A false floor of  $\frac{1}{16}$ -in. aluminum is riveted to the underframe. Five 13-gage pressed-zee stringers support a Keystone-type aluminum top floor. Armstrong cork is applied to the top floor as a filler and a  $\frac{3}{8}$ -in. layer of cork covers the floor as a base for the linoleum. At the electric locker  $\frac{1}{4}$ -in. Masonite is used over the top floor.

The sides, roof, ends, floor and air ducts are insulated with Ultralite. It is three inches thick in the sides and roof, two inches in the ends and between the

top and false floors, and one inch around the air ducts. In addition the side posts, carlines, purlines and end doors are packed with Ultralite. All steam lines under the car are covered with one-inch Wovenstone.

### Mechanical Equipment

The four-wheel trucks were designed after studies, made by the Pennsylvania, showed that a combination helical and elliptical bolster-spring arrangement gave a very smooth ride. The elliptical springs carry about 25 per cent of the weight on the bolster. The truck frames are cast high-tensile steel to reduce weight. Truck-mounted brake cylinders are connected to clasp brakes. The axles have 5 $\frac{1}{2}$ -in. by 10-in. journals with Hyatt roller bearings and 36-in. multiple-wear rolled-steel wheels.

The cars are equipped with the Waugh Equipment Company's twin-cushion draft gears, National tight-lock couplers, A.A.R. type H-81, and P.R.R. type buffers.

Two 150-gal. stainless-steel tanks carry the water supply. The tanks are insulated with 1 $\frac{1}{2}$ -in. Ultralite and have a steam loop around them to prevent freezing.

## COMMUNICATION

### Railway Labor Act

AMES, IOWA

TO THE EDITOR:

Professor Sidney L. Miller, University of Pittsburgh, offered several unique proposals in his discussion of the Railway Labor Act before the Associated Traffic Clubs of America, which was published in the *Railway Age* of October 18, 1947, page 59. I was especially interested in Prof. Miller's recommendation of what he calls an "improved Railroad Labor Board" with powers comparable to those of the board created under the Transportation Act of 1920, but a board constituted wholly of public representatives, this board to be supplemented by such regional adjustment boards as may be deemed essential.

There may be something to the idea that the board be composed of representatives of the public only. The Arbitration Act of 1888 provided for an *ad hoc* board of three arbitrators, one appointed by each party to the dispute and a chairman selected by the two. The chairman could possibly be a "representative of the public" but such representation was not required by the law. He merely had to be agreeable to the two other board members.

The Erdman Act of 1898 required the U. S. commissioner of labor and the chairman of the Interstate Commerce Commission (upon request of either party to a controversy) to "put themselves in communication with the parties to such controversy" and to use their best efforts to settle the dispute by mediation and conciliation. This probably could be considered the first approach in railroad labor legislation to Prof. Miller's suggestion. The record shows that 61 cases were settled under the mediation and conciliation provisions of the Erdman Act between 1906 and 1913. Twenty-six disputes of the 61 were settled by mediation alone, ten by mediation and arbitration, and six by arbitration alone. All the awards were fully complied with except one. It cannot be said that the Erdman Act was a failure.

Experience with the Erdman Act made it clear that the government accomplished more by mediation than by

arbitration for the settlement of labor disputes in the railway industry. Thus in 1913, the Congress passed the Newlands Act which established a permanent Board of Mediation and Conciliation. This board consisted of a commissioner, to be appointed by the President, together with two additional commissioners designated by the President from among other officials of the government. Here again representation from the carriers and labor was not considered an important factor.

The Transportation Act of 1920, to which Prof. Miller refers, was developed from the procedures established by the director general of railroads during government operation, 1916 to 1920. Title III of the act provided for a Railroad Labor Board of nine members to be appointed by the President, three representing management, three representing labor and three representing the public.

In the present labor act the National Mediation Board, appointed by the President, consists of three members, no more than two of whom can be of the same political party. The Adjustment Boards have 36 members, 18 selected by the carriers and 18 by organizations of railway employees. The success of the Railway Labor Act of 1926 has undoubtedly been because of the sincere desire on the part of both railway management and labor to make the act work. At the same time, neither party has been happy or satisfied. The advantages enjoyed by labor leaders under the Wagner Act and other New Deal labor legislation could not help but make the railway labor organizations feel that they could do better. The Railway Labor Act was amended in 1934, 1936 and 1940. From 1935 to now, railway management has been in no position, primarily because of the situation in other industries, to do anything more than to maintain its position. The amendments to the Wagner Act by the Taft-Hartley Act have drastically changed the situation. For that reason, Prof. Miller's observations are most opportune. His recommendation for a Railroad Labor Board constituted wholly of public representatives has considerable merit, especially when considered from the background of railroad labor legislation.

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# I. C. C. BUREAU ANALYZES 1947 EARNINGS

**"Monthly Comment" shows last year's revenues were 62.4 per cent above 1941 gross, but net railway operating income was down 21.8 per cent**

Class I railroads last year collected 62.4 per cent more in operating revenues than in 1941, but they realized 21.8 per cent less net railway operating income and 4.3 per cent less net income, according to the analysis of 1947 results which appears in the latest "Monthly Comment" issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. Last year's gross was \$8,684.7 million, compared with \$5,346.7 million for 1941, which the bureau calls "predominantly prewar"; net railway operating income and net income were \$780.7 million and \$480 million, comparing with respective 1941 figures of \$998.3 million and \$501.4 million.

As the bureau points out, the 1947 gross was the largest reported for any peacetime year, being only 8 per cent below the \$9,436.8 million reported for 1944, the peak war year. Last year's "high level" of revenues is attributed to the "record volume of peacetime traffic combined with substantial increases in rates, fares and charges authorized by this commission, primarily as an offset to the increased cost of operation." The 1947 operating expenses, at \$6,797.1 million, were up \$3,133 million or 85 per cent above those of 1941, while total railway tax accruals increased \$389 million or 71.1 per cent, payroll taxes being up 156 per cent.

## **"Wringer" Causes Favorable Showing**

Meanwhile, the comparison of 1947 with 1946 makes last year look favorable, but William T. Faricy, president of the Association of American Railroads, has called 1946 an "abnormally low earning year" (see *Railway Age* of February 14, page 63). The 1947 net railway operating income and net income figures given above reflect increases of 26 per cent and 63.8 per cent above the respective 1946 figures of \$619.8 million and \$293 million. As to these 1946 figures, the bureau notes that they were favorably affected by federal income tax credits of about \$170 million.

A table in the "Comment" shows that the 4.3 per cent decline in net income after all charges for 1947 as compared with 1941 was the result of an increase of 79 per cent in the Western district, which was more than offset by declines of 58.3 per cent in the Eastern district, 5.4 per cent in the Pocahontas region, and 27.3 per cent in the Southern region. The Western-district increase, however, was due to the lower 1947 fixed and contingent charges, brought about "primarily as a result of reorganizations." Figures for the full year 1947 were not available when the bureau prepared its analysis, but it gives the fixed and contingent charges for the 11 months ended with November, 1947, as \$436.8 million, as compared with \$584.7 million in the same period of 1941. Of this \$147.9

million reduction, \$89.1 million or 60.2 per cent was in the Western district.

In looking over the distribution of 1947 and 1941 gross by districts, the bureau found that "the most interesting as well as somewhat curious point to be noted" was the "almost exact reversal of the relative freight revenue importance of the East and West between the two years." The figures show that in 1947 the freight revenue in the Eastern district accounted for 37.8 per cent of the U.S. total as compared with 41.4 per cent in the West. In 1941, the Western district percentage was 37.5 and the Eastern district 41.9. As to passenger revenue, the Western district increased its proportion by 2.3 percentage points (from 31.2 per cent to 33.5 per cent) in 1947 over 1941, but here the Eastern district slipped less than one percentage point—from 51.2 per cent of the total in 1941 to 50.5 per cent in 1947.

Regional operating ratios in 1947 ranged from 70.8 in the Pocahontas region to 83.3 in the Central Eastern region. This compares with a 1946 range from 73.4 to 88.3, the low and high regions remaining the same. In 1941, the range was from 55.0 in the Pocahontas region to 71.0 in the Central Western region; while in the peak war-traffic year of 1944 it was from 59.2 in the Southwestern region to 72.7 in the Central Eastern region.

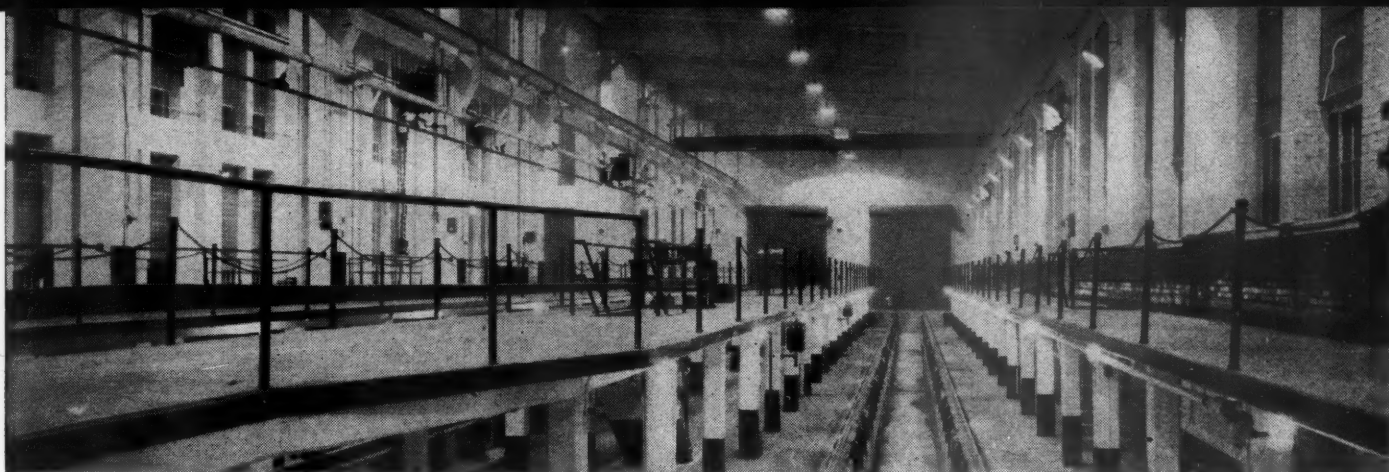
The bureau's usual analysis of the latest monthly results showed that the freight revenue for December was 6 per cent less than in November, after adjustment to a 30-day month of four Sundays; but it was 23.1 per cent more than in December, 1946. December passenger revenue, on the same basis, was 17.5 per cent more than that of the previous month but down 3.5 per cent from December, 1946. The freight revenue index (based on the 1935-39 monthly average as 100) was 233.8 for December, compared with November's 248.7 and 189.9 for December, 1946. The December passenger revenue index, at 255.4, compared with November's 217.3 and December, 1946's 264.7.

## **Mileage Abandoned Since 1916**

Another article in the "Comment" presents figures showing changes in the mileage of first main track operated by railroads of all classes, December 31, 1946, compared with December 31, 1916. The total of 266,438 miles as of the end of 1946 represented a drop of 27,813 miles or 10.94 per cent below the December 31, 1916, total of 254,251 miles. A tabulation by states shows that all except Montana, Oregon and Wyoming lost mileage over the 30-year period, the losses ranging from 0.13 per cent in North Dakota to 25.18 per cent in Louisiana. In Texas, the state with the large-

(Continued on page 60)





Psychological effect of color can be made an important adjunct in railway shops

## COLOR IN RAILROAD TRANSPORTATION

*Science and experience show that, correctly used, it can be an effective tool in improving employee and public relations*

By **GEORGE D. GAW**

Director, Color Research Institute of America  
Chicago

The power of color is beginning to be realized on the railroads. A good start has been made, but, considering its full potentialities, it cannot be said that the surface has been more than scratched, or that the colors chosen have always been the best to produce the results desired.

Like sound, color exercises a profound influence on conscious and subconscious man. It can warn; it can stimulate, soothe or depress; it can please or offend; it can strain or relieve the eyes and nervous system; and it can actually affect personalities and change the relationships between personalities. Since all of these factors are involved in railroading and the relations between the railroads and their employees and the public, color, properly used, can be a valuable ally of the railroads in almost every department and in almost every transaction between them and their patrons or potential patrons.

Color has long been used by the railroads as a signaling device. The red and green lights along the tracks and the black-and-white striped gates at rail crossings are as familiar sights as the now more numerous stop-and-go lights at city street intersections.

Recent visibility tests have shown that black and yellow stripes have greater visibility than black and white. Some safety-conscious railroads and communities are introducing the yellow and black combination both at rail crossings and at other points of danger. The yellow and black stripe pattern has in recent years also been introduced as a safety measure in many industrial plants.

Some communities and agencies have adopted patterns of white, black and yellow, with the black stripe between the white and yellow stripes. This has special advantages under certain conditions because, while the yellow adjacent to the black has much greater visibility in the daytime, the white next to the black

is seen more easily under the poor lighting conditions of night. The combination of white, black and yellow is, therefore, an ideal safety device for use in many ways on the railways.

The stop-and-go signal lights on the railroads and at street intersections, and the striped gates at rail crossings are taken for granted. Subconsciously they warn and command, with little thought on the part of most people to the fact that these safety devices are essentially colors.

### **Psychological Power**

The most important power of color, the psychological, is now being introduced into the field of rail transportation, largely in new passenger equipment. Most of the modern streamliners now in service have taken advantage of and have demonstrated the effect of modern functional design on passengers. However, while the present streamliners are a big step from the old trains toward achieving psychological objectives, there are many important steps yet to be taken. True, the drab and cluttered train interiors are disappearing, but, unfortunately, too often the colors being used for covering up the cold metal are inappropriate, or less appropriate than they might be. When cars are psychologically color-tuned to the fullest extent, the interiors will be smooth in surface and lyrical in line, and the colors will be of specific cool values that are conducive to relaxation.

As a result of the modern equipment that has been placed in service by many roads, one frequently hears passengers say such things as, "This time I was on a fine train," or "This trip didn't seem tiresome because I was on a modern train." Although people are conscious of and speak of the physical comfort, actually, the psychological effect of their surroundings has



Car interiors (above) should incorporate a restful, relaxing color scheme, rather than one that is an emotional irritant. The colors used in passenger waiting room areas (below) should be in the milder tones, whereas, in ticket offices, they may well be more stimulating





caused the satisfying sensation. The "easy to look at" environment is even more satisfying to the traveler's nervous system than a soft seat. The eyes are very sensitive to softness and smoothness, and are extremely affected by hue and color value.

Many people are already aware of the fact that a vibrant color or color scheme in a car interior is an emotional irritant and not conducive to encouraging travel. The vibrant colors prevalent in many of the newer passenger cars are often attractive, but are genuinely pleasing to only the very few individuals who need highly vibrant colors and much noise for stimulation. To encourage travel, the interiors of cars should be treated with cool tones of specific value, such as green-blue tones that do not absorb too much light, to meet the emotional needs of the majority of people. Colors that are too cold, however, are just as negative as those that are too warm. Colors can be depressing as well as over-stimulating.

### Scientific Selection Needed

Color is an especially potent medium because it is not tangible, its power is not conscious and evident. Those of us who have studied the effect of color under controlled conditions know that colors affect our behavior, and the characteristics of specific colors on behavior. As a result, we can channel the power of color to produce the results desired.

It is easy to recognize that red is warm and blue is cold; that orange is hot and yellow is sunny. But to dilute any of these colors to the appropriate tint to produce the effect desired is a problem for the color specialist. The Color Research Institute has classified colors for all kinds of interiors to produce all kinds of effects, just as it has classified colors for merchandising purposes, packaging, and advertising. As in promoting sales, there are specific colors and color schemes for specific purposes in transportation. For example, as already mentioned, the interiors of passenger cars should be treated with cool, relaxing tones to meet the emotional needs of the majority of people.

The colors used in railway ticket offices should be inviting and stimulating, but always harmonious. Green-blue tones and orange-red tones (greatly diluted) are psychologically related and, therefore, harmonious. Green and magenta red tones are natural mates; violet-blue tones and yellow are also harmoniously related. For the interiors of passenger stations the value should be milder and more delicate, and should reflect more white light.

Yellow is an excellent danger signaling device. Combined in the form of stripes with black and white it forms a most successful medium for accident prevention. The same yellow that is used at railway crossings should be used on all luggage wagons and trucks at railway stations. Train steps painted yellow would eliminate many accidents and a prominent yellow and black emblem on the front of locomotives would prevent many a tragedy.

The yellow should be used regardless of the general color scheme of the locomotive or train. It is not meant to be part of an esthetic scheme, but to serve primarily as a warning of danger. And, any general thought to the contrary, it will not create an impression of discord.

In railroad shops, where light reflection has often been the only consideration in decoration, the psychological effect and contrast factor of color are also important. Here, the colors of high visibility—yellow and black combinations, orange and red—should be used to play their part in preventing accidents.

We now know that eye fatigue and headaches can be caused by highly reflecting walls and work benches, by color afterimage, and by lighting that is too weak or too glaring. Scientifically applied colors or finishes not only cut down such disturbing elements but also produce a favorable psychological effect.

The scientifically chosen hue of appropriate tone or correct neutral value is a potent factor in raising worker morale, whereas the wrong color (there is no such thing as no color—psychologically, black, white and gray are all colors) inevitably lowers the morale of workers. Correct colors are silent music to the personnel. Wrong colors irritate and disturb.

Insufficient contrast causes eye fatigue and slows up production. Too much contrast is just as fatiguing and dangerous as too little because the eye must constantly adapt itself to extreme changes in light reflection. For example, the handling of white or brilliant metal objects against a black background is just as injurious to the eyes as the handling of a black object on a black background, or of an aluminum piece on an aluminum or white work table. Thus, to provide maximum visibility without extreme eye adaptation, the contrast ratio on the working area must be just right.

Afterimage is also a menace in a place of work and is often responsible for low production. When a person concentrates on a color, then turns his eyes to a neutral or white surface, he sees the complement of the color on which he had been concentrating. If he works on a yellow object he will see blue afterimages. From a green object there will be red afterimages. Many complaints of headaches and numerous reports of "spots before my eyes" are caused by this phenomenon. These can be avoided only by color-tuning the plant—by treating it with complementary hues of specific values.

In a color-tuned plant the spirits of the workers are higher than they would be otherwise. There are no white walls to create glare and cause headaches. The machines are color-treated to provide proper contrast with the material worked on. Hazardous parts of the machine are painted with a color of great visibility to warn of danger, and, as a result, accidents are reduced.

Walls, whether in shop, office, station, or car interior, are more than physical barriers. Their function is not limited to keeping out rain and cold or enclosing and protecting property. They also possess psychological factors and, in addition, serve a purpose in illumination.

Where there are surfaces and light, there is color, and where there is color, there is psychological effect. This applies everywhere on the railroads—in railroad stations, ticket offices, shops, and passenger equipment. The objective should be to produce the most favorable psychological effect on patrons and employees—which can be achieved only through the selection and use of the proper colors and color combinations. The sooner railway officers recognize these facts and take advantage of them, the better it will be for their industry.

## Making Regulation More Realistic

Further comment—this from a staff officer of an important eastern railroad—on the problem of securing an adequate return for the railroads in a period of rising wages and prices:

"A device which could put an end to dealing with the two kindred questions of wages and rates in separate compartments might be found if the I. C. C.—whose members presumably are intimately acquainted with the entire railroad financial situation—could in some way be made a part of wage proceedings. The statements of the carriers' representatives as to their financial condition and ability to pay get a pretty thorough going over in wage cases with the result, I am afraid, that the facts become confused. Possibly, official participation by the commission would have some beneficial effect here. I do not think that the I. C. C. would be guilty of estimating future earnings with undue optimism.

"However, even if such a correlation were worked out and an automatic rate increase came to be a part of the wage case, we would still be faced with the fact that railroad labor has had preserved to it the right to strike. If mediation is declined or is unsuccessful and arbitration takes place, we still know from experience that the unions, if they wish, can refuse to go along with the arbitration board's findings. In such a case, when a strike vote is taken, a Presidential fact-finding board

has to depend for enforcement of its findings on public opinion. Mr. Roosevelt, in my opinion, just about entirely destroyed the effectiveness of these boards by his performance in the wage case of 1943.

As pessimistic as it may seem, I think that the only way to combat economic pressure is with economic pressure. Unfortunately, if today we had a strike of any vital part of railroad labor, which would tie up the operation of trains as happened in 1946, the outcome is government seizure of the railroads, putting the strikers to work under the fiction that they are working for Uncle Sam. I think the feeling is pretty general that, in such a case, labor eventually gets from the government what it is after.

"It seems to me that the law of supply and demand works in railroad labor relations as in most everything else and nothing would prevent or end a strike quicker than the knowledge that there are a great many people willing to do the strikers' work at the strikers' current wages. However, such a procedure means trouble, dislocation and a great deal of inconvenience. But until management is in a position to resist threats of economic pressure in kind, I am afraid that the spiral will continue upward. Of course, depriving labor of the right to strike in industries essential to the public health and welfare is an easier but less desirable alternative."

## I.C.C. BUREAU ANALYZES 1947 EARNINGS

(Continued from page 56)

est mileage in both periods, the decline was 1.17 per cent—from 1916's 15,867 miles to 1946's 15,681.

Meanwhile, percentage declines in mileages did not vary greatly by territories, the range being from 9.15 per cent in Southwestern territory to 12.93 per cent in Southern territory. In actual mileage, however, Official territory showed the greatest decline (9,324 miles) and Southwestern the smallest (3,039 miles).

Last year's employment figures, as presented by the bureau, show that the average number of employees of Class I line-haul steam roads, based on the 12 mid-month counts, averaged 1,352,005 for the year. This was below all years since 1942, but above the level of the years 1940-42. The peak employment of the 1940-1947 period was in 1945 when the average number of employees was 1,420,266.

Bringing up to date the bureau's studies of the growth in the use of steel railway cars, the "Comment" shows that situation as of December 31, 1946. At that time, 67.8 per cent of the freight-carrying cars were of all-steel construction, 30.4 per cent were of steel-underframe construction, and only 1.8 per cent were of other construction, mostly wooden. The situation as of December 31, 1920, was as follows: Steel, 27.1 per cent; steel underframe, 38.2 per cent; other 34.7 per cent. The bureau notes that the proportion of steel cars increased 7.7 percentage points during the 1941-45 period, as compared with an increase of 13.7 percentage points in the preceding five-year period. However, it suggests that "scarcity of steel during the war years and in the immediate postwar period has no doubt seriously retarded the building of steel cars."

"The trend toward steel cars has been even more decided in passenger-train service," the "Comment" continues. "On December 31, 1920, Class I roads had 53,501 passenger-train cars in service, of which 15,111 (28.2 per cent) were steel; 6,573 (12.3 per cent) steel

underframe, and 31,817 (59.5 per cent) of other construction, mostly wooden. At the close of the year 1946 these carriers had 38,356 passenger-train cars in service, distributed by types of construction as follows: Steel, 32,184 (83.9 per cent); steel underframe, 5,424 (14.1 per cent); and wooden, 748 (2.0 per cent). All of the passenger-train cars of the Pullman Company (7,281) as of the close of the year 1946 were of steel construction.

## DO FIRST COSTS RETARD ELECTRIFICATION?

(Continued from page 49)

for high voltage a.c. systems will save about half the cost of ordinary bonding. This is not true for d.c. installations.

Engineering costs may be appreciably decreased by giving the fabricator of structures the design work he will naturally duplicate.

### Anticipated Cost Reduction

Savings which can be effected by improved design of the overhead system are itemized in Table II.

Table II  
Possible Reduction in the Total Cost of Electrification

|   | Cost reductions, per cent |       |
|---|---------------------------|-------|
|   | Steel                     | Wood  |
| Central concrete plant .....                  | .25                       | .50   |
| Off-track, crane .....                        |                           | .50   |
| Off-track, small motor cars .....             | .25                       | .50   |
| Clamped attachments .....                     |                           | .50   |
| Distribution materials—by truck .....         |                           | .25   |
| Ground crews—X-span, etc. ....                | .60                       | .80   |
| Ground crews—catenary spans .....             | 1.00                      | 1.20  |
| Simple catenary span—compound .....           | 1.80                      | 1.80  |
| A.C. bonding .....                            | 1.10                      | 1.10  |
| Off-set catenary, or lower contact wire ..... | 7.50                      | 1.50  |
| Engineering .....                             | 2.00                      | 3.00  |
|   | 14.50                     | 11.10 |



# GENERAL NEWS

## Emergency Board Hears More Employee Proposals

### Unions wind up testimony on their wage and rule demands

Emergency board proceedings in the case of the demands of the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen & Enginemen, and the Switchmen's Union of North America for a 30 per cent wage increase and changes in 25 working rules entered their third week with the session commencing February 16 at Chicago. The three organizations completed presentation of their argument on February 18 and the carriers commenced presentation of their case. Both parties to the dispute have agreed to an extension until March 10 for completion of the hearings, which otherwise would have had to end by February 26.

**Seek Shorter Turn-Around Day**—W. R. Hamm, general chairman, B. L. E., Harrisburg, Pa., testified regarding the employees' proposal to reduce the short turn-around passenger day from 8 hr. within a spread of 10 hr. to 6 hr. within a spread of 8 hr. Mr. Hamm declared that there is considerable opportunity for the carriers to readjust schedules so that the basic 8-hr. day might be secured for short turn-around crews, but, in later testimony, he brought out a "stop-gap" provision which would require final release at the initial terminal. This provision, he explained, "is especially important at this time, since the adoption of the 6-in-8 rule may tempt the carriers" to readjust assignments so that the point of release will not be the point at which the initial run commenced.

General Chairman Hamm also testified on the employees' rule proposal that overtime in passenger service should be at the rate of  $1\frac{1}{2}$  times the basic rate. The "basic day" for road passenger engine service employees is presently 5 hours, and overtime is at an hourly rate of  $\frac{1}{2}$  of the basic daily rate. The change is sought "to rectify certain inequities" between the straight and overtime rate of these employees. Mr. Hamm stated that there were already a number of lines which have "abandoned the archaic 1919 overtime of  $\frac{1}{2}$  the basic daily rate," and named 5 roads which have passenger overtime agreements more favorable to the employees than the representative existing rule. None of these, however, equaled in generosity

### "Why Be in a Hurry For That Harp?"

In a new leaflet for public distribution the New York Central attacks the highway crossing accident problem in a light vein, employing small sketches and breezy sentences to drive home to the automobile driver his responsibility in avoiding collisions with trains at grade crossings. The text points out that 72 per cent of such accidents occur when the motorist has a clear view of the train and that in one-third of the cases the automobile is driven into the side of the train.

the employees' proposal, and one of the 5 roads named has been strikebound continuously since September, 1946, because of its alleged substandard wage scale.

**Five Hours Equal to Eight**—Board Member Bushnell asked Mr. Hamm if the enginemen were not a "favored lot with respect to a five-hour day" over other American workers. Mr. Hamm contended that the enginemen produced a day's work in five hours. He claimed that since the railroads sell tickets and materials on a mileage basis, the employees were entitled to overtime after five hours, which is the equivalent of 100 miles at 20 miles per hour, or the basic passenger day for that class of employee. He asserted that the five-hour day for engineers was justified on the basis of the physical and mental strain, and because they were disqualified if they failed to pass periodic physical examinations. In referring to New York-Washington passenger runs on which the engineers earn a month's pay in 10 days, Mr. Hamm stated that if these men were required to work every other day, they would be nervous wrecks and "a charge on the community."

**Penalty Rule to Prod Carriers**—A. F. Kummer, general chairman, B. L. E., St. Paul, Minn., was called as a witness on the union's proposals to establish initial and final terminal delay rules providing for extra compensation for all time held in excess of 45 minutes at initial terminals, and for all time after passenger trains stop at their final station or freight trains enter final terminal yard tracks, until relieved from duty. Mr. Kummer testified that the existence of these rules would make the carriers take measures to see that

they did not occur. He stated that the proposal provides no time allowance at all at final terminal, because, if it did, the carriers would take advantage of it. J. P. Shields, first assistant grand chief engineer, B. L. E., stated that much final terminal delay was due to interference by switching crews, and that there would be little or no final terminal delay if the carriers provided the right kind of supervision. Mr. Shields further stated that adoption of this rule would encourage the roads to change facilities so as to permit more expeditious handling of trains at terminals.

Mr. Kummer testified also on the union proposal that enginemen should have a designated point for going on and off duty, such point to be the same place and to be established by agreement. He told the board that this rule was needed because the practice of requiring engine crews to report at enginehouses and then relieving them at yards or passenger stations at the same terminal was becoming increasingly prevalent with the expanded use of Diesel locomotives. This practice, Mr. Kummer stated, frequently compels the crews to make long trips across town via public transportation—usually with their clothes boxes—to the original reporting point in order to get to their lockers or to their parked automobiles, and, in some cases, to register in.

**Premium for Night Work**—A number of witnesses were called to testify on the alleged need for a night differential of 10 cents per hour for yard employees. They claimed night work was less desirable because of the added hazard of working in darkness, the inadequate "owl" service available on city transportation lines serving yards, unnatural hours of rest, and greater extremes of climate.

A. W. Telley, general chairman, B. L. F. & E., Hammond, Ind., testified with respect to the union proposal which provides, primarily, that when the services of a pilot are required, an engineer pilot must be used. In his testimony, he referred to the recommendation of the 1946 emergency board on this same proposal, stating that he believed "the board inadvertently erred" in arriving at its conclusion that, "because such requirement as is embodied in this proposal would be tantamount to an invasion of managerial prerogatives and functions, the board is unable to recommend the adoption of the proposed rule." It was Mr. Telley's stand that the board, in so recommending, had "unintentionally done violence to the

well-established principles of collective bargaining," since the unions hold the right to negotiate with the carriers in matters pertaining to working conditions and contend that this rule is sought for safety reasons. Mr. Telley testified, however, that the proposal did not contemplate that a road foreman of engines alone could serve as a pilot, even though qualified, because the work belonged to the engineers as a class.

Mr. J. J. Driver, general chairman, B. L. F. & E., Rochester, N. Y., testified on the proposal which would prohibit engineers and firemen from throwing switches. He contended that the proposed rule was needed in the interest of safety, and that enginemen on engines running light were frequently required to violate operating rules, particularly in effecting crossover moves, because of physical impossibility of throwing switches and operating the locomotive while flagging at the same time.

Brook Jones, general chairman, B. L. F. & E., Minneapolis, Minn., testified in defense of the organizations' "minimum guarantee" proposal which would allow assigned employees not less than the full mileage or hours of their regular assignment, including any overtime and arbitraries which are a part of the assignment, when not used or when used in other service. The proposed rule also provides that unassigned or pool service employees used in other than their turns shall be paid not less than they would have earned had they followed their turn in the unassigned or pool service. As presented to the board, the rule was somewhat revised from the original proposal, which included also a clause that "regular assignments shall not be established for less than 6 days per week."

In cross-examination, it developed that if, for example, the New York Central annulled the "Twentieth Century" because of some catastrophe which made its operation impossible, the road would be required to pay the engine crew just as though it had gone out on the run, and that if that crew were then used in some other service, they would receive separate and additional pay for that run. If this instance occurred on a Sunday or holiday, the crew would receive time and one-half for the work it didn't do, as well as time and one-half for any work actually performed. Employees did state that if the assignment, but not the run, were annulled—if schedule rules permitted—no time would have to be paid.

Existing schedule rates usually provide 48-hr. advance notice of annulment of an assignment.

The employees introduced a motion picture on yard engines and switching service as one of their exhibits. The film, taken in and around Chicago and Minneapolis, Minn., was shown to the board in support of the organizations' proposals for increased yard rates and differentials.

## Limits T. & P. Trucking to Auxiliary Operations

**Must drop all-motor freight business under conditions imposed by I.C.C.**

Reporting on further hearing in 16 reopened proceedings involving trucking certificates held by the Texas & Pacific Motor Transport Company, subsidiary of the Texas & Pacific, Division 5 of the Interstate Commerce Commission has modified the certificates so that each shall include all five conditions which the commission has been imposing to insure that highway freight operations of railroads remain auxiliary to rail service. The title case is No. MC-50544, and the effect of the division's determination will be to drive Transport out of the all-motor freight business which it has been conducting on some routes.

While there have been variations, the five conditions whereby the commission has been tying railroad truck operations to the rails are generally as follows: Condition 1 limits the character of truck service which may be performed to that which is auxiliary to, or supplemental of, rail service; condition 2 stipulates that a railroad trucking operation may not serve any point not a station on the rail line; condition 3 in one form imposes the prior-or-subsequent-haul-by-rail requirement and in another form it sets up "key points" between which truck service is prohibited; condition 4 requires that all contractual relations between railroads and their trucking agencies be reported to the commission; and condition 5 reserves to the commission the right to impose such further conditions or limitations as it may find necessary in order to restrict the operations to those which are auxiliary to train service.

**Certificates Varied**—There was no uniformity as to the inclusion of these conditions in the 16 certificates covered by the division's report; and five did not contain condition 1, specifically limiting the trucking service to that which is auxiliary to rail service. It is under those five certificates that Transport has been conducting its all-motor operations, which are between Shreveport, La., and Gladwater, Tex., and between Wills Point, Tex., and Big Spring. In modifying all 16 certificates to make them subject to all five conditions, and thus require discontinuance of the all-motor services, the division relied on that fact all 16 contained condition 5, reserving to the commission the right to impose further conditions or limitations.

Three of the five certificates under which the all-motor services have been conducted were acquired by purchase from sellers who formerly operated the routes as independent truckers; but the

division made no exception with respect to them. In commission reports which authorized the purchases it found language which left "no doubt" that the acquisitions were approved "not for the purpose of permitting applicant to engage in motor operations independent of its proprietary railroad but solely to enable it to render a service auxiliary to or supplemental of rail service."

**Precedent Established**—Previously, the division had cited the commission's decision in the *Rock Island Motor Transit* case, 40 M.C.C. 457, which held that accomplishment of the national transportation policy requires that: "Except where unusual circumstances prevail, every grant to a railroad or to a railroad affiliate of authority to operate as a common carrier by motor vehicle, or to acquire such authority by purchase or otherwise, should be so conditioned as definitely to limit the future service by motor vehicle to that which is auxiliary to, or supplemental of, train service." (See *Railway Age* of March 23, 1946, page 650.)

Meanwhile, the division did not pass upon the lawfulness of the all-motor services conducted up to the present time. It confined itself to an expression of its conviction that the "public interest requires" that all future operations covered by the 16 certificates be of the supplemental-to-rail-service type. The routes involved extend generally from New Orleans, La., on the east, to El Paso, Tex., and Lovington, N. M., on the west; a total distance of approximately 1,150 miles. The division's report was made by Commissioners Rogers and Patterson, since the third member, Commission Chairman Lee, "was necessarily absent and did not participate."

## Wants Car Program At 14,000 a Month

**Transportation report issued by House's foreign-aid committee**

"Whatever steps are necessary to secure the achievement in the near future of a target rate of production of 14,000 freight cars per month should be taken," the House of Representatives' select committee on foreign aid said in a report made public on February 17. The report, entitled "Transportation as It Affects the European Recovery Program," is the seventeenth of a series which the committee has been issuing to assist Congress in its consideration of the Marshall Plan.

Like other reports of the series, the transportation survey "does not necessarily represent the views of all the individual members of the committee," which is headed by Representative



Eaton, Republican of New Jersey, and has Representative Herter, Republican of Massachusetts, as its vice-chairman. The committee's staff director is W. Y. Elliott, who served during the war on the staff of the former War Production Board—first as director of the Division of Stockpiling and Transportation and later as vice-chairman for the Office of Civilian Requirements.

**Favors Voluntary Action**—The report's recommendation that freight-car production be brought to the 14,000-per-month level is based on a finding that the principal domestic problem which the European recovery program faces "is that of a shortage of freight cars, resulting from recent increases in the demand for rail transportation and recent decreases in the amount of equipment available." While allocation of steel is called for if it be found necessary, it is nevertheless expected that voluntary arrangements will produce the desired result.

"The steel companies and the car builders," the report said, "should be given time to work out their difficulties on a voluntary and cooperative basis, but if they do not succeed in bringing production up to the desired level, government intervention may be necessary. If, after a period of trial, it should be determined that inadequate steel is being delivered to the car builders, a mandatory allocation should be made. If it should be determined that the car builders are using excessive amounts of steel for other purposes, mandatory control may have to be imposed upon them. From the present trend of events it does not appear that such stringent measures will be necessary."

With respect to the 14,000-car program, Secretary of Commerce Harrison recently indicated that benefits of an increase above the present 10,000-car program were being appraised in the light of the possible effects on supplies of steel that would remain available for "other areas of priority," such as housing, farm machinery, and petroleum equipment (see *Railway Age* of February 7, page 66).

**Calls Railroads Slow**—In its discussion of car shortages, the report which came from the House committee presented figures on the "decline in the car population"; and it attributed the drop "in the first instance" to the "failure on the part of the railroads to realize the probable magnitude of post-war demands for transportation and to order equipment to deal with these demands." The report also said: "When late in 1946 the railroads got around to placing heavy orders for cars, the car-building industry was busy with export orders. Since then the car-building industry has found it impossible for a variety of reasons to bring production up to the current target level of 10,000 cars a month. Since retirements of over-age and war-worn equipment have been approaching 7,000 cars a month, we have not yet been

able to make any headway in increasing our car population."

Even if a 14,000-per-month production were attained, the increase in car supply would be "painfully slow," the report added. It went on to suggest full use of such "short-term remedies" as repair of bad-order cars and cooperative shipper-carrier action to reduce turn-around times. Meanwhile, the report suggested that a system of transportation priorities should be established only as a last resort. It noted that the authority under which the Office of Defense Transportation functions has been extended until February 28, 1949, and asserted that "vigilance" in the administration of O. D. T.'s minimum loading orders "should be maintained."

"In view of the temporary nature of many of the problems and in view of the wide knowledge and experience of the Interstate Commerce Commission, the Association of American Railroads, and the individual railroads, main reliance should be placed on voluntary action through existing mechanisms," the report also said. "The functions which require to be performed by some agency of the government are now those of coordination, expediting, and interpreting government policy, rather than those of administration and control. If the situation deteriorates more, direct control powers may be needed."

**Would Advise O. D. T.**—The government agency with the functions listed above, the report went on to explain, "should regard it as one of its chief duties to maintain pressure on all procuring institutions, public and private, to buy in ways that will be most economical of transportation." It is next indicated that such a job could be done by the proposed Emergency Foreign Reconstruction Authority, which legislation sponsored by Vice-Chairman Herter of the committee would create to administer the relief program. Among other things, it is suggested that the "new agency should have power to initiate and propose to the O. D. T. directives relating to car movements for export."

Among other recommendations of the report is one calling for prompt action by the I. C. C. on the Ex Parte 166 case wherein the railroads are seeking permanent freight-rate increases averaging 30 per cent in substitution for the temporary advance of 17.5 per cent which became effective in January. The application, the report said, should be acted upon "one way or another" at the "earliest possible moment," to remove "uncertainties concerning revenues which may be interfering with repair programs and operating efficiency."

The report also dealt with the "European Recovery Program and Ocean Shipping," and "European Inland Transport Under the Recovery Program." In the latter section it is recommended that the United States "should do everything in its power to

encourage the maximum production of transportation equipment in Europe"; and that meanwhile it "should produce for European use a minimum of 20,000 freight cars by July 1, 1949." The report does not recommend that any passenger cars be supplied to Europe "unless compelling evidence not now available demonstrating their urgent need is produced."

## 96 Railroads Receive Coach Fare Increase

Commission authorizes hike for 85 western carriers and 11 in South

The Interstate Commerce Commission this week authorized 96 railroads, including 85 in the Western district and 11 in the Southern region, to increase, on five-days' notice, their one-way coach fares by 13.63 per cent, or from 2.2 cents to approximately 2.5 cents per mile, and their round-trip fares to approximately 2.25 cents per mile in each direction.

At the same time, the commission authorized (1) the carriers to raise their minimum one-way fares from 10 to 15 cents; and (2) the western roads to increase their round-trip transcontinental coach fares from 1.716 cents per mile to 1.8316 cents per mile in each direction and to boost their minimum one-way first-class and intermediate fares from 10 to 15 cents. The commission's order also applies to intrastate rates within Arkansas, Illinois, Iowa, Michigan, Minnesota, Montana, Nebraska, North Dakota and Wisconsin.

As a result of the commission's action, the one-way coach fare on all railroads, except the New York, New Haven & Hartford, is now on the same level. As reported in *Railway Age* of December 13, 1947, page 67, the New Haven was authorized to increase its one-way coach fares to approximately 2.875 cents per mile. Earlier last year, the commission authorized Eastern district carriers and 26 roads in the South to increase their one-way fares to 2.5 cents per mile.

**Effect on Revenues**—According to the commission's report, written by Commissioner Rogers, the increases will result in additional annual revenues of \$21,000,000 to the western roads and \$4,200,000 to the southern carriers. The increases, the commission said, will enable the carriers to acquire additional new equipment, improve their service to the public, and meet the competition of private automobiles and other forms of transportation more successfully.

With respect to the western roads, the commission reported that their passenger-train revenue declined from a

peak of \$922.9 million in 1944 to \$512.2 million last year, while passenger-train operating expenses and taxes rose from \$324 million in 1936 to \$730 million in 1947. Their coach-fare revenue, exclusive of commutation, declined from \$403.7 million in 1944 to \$227.7 million in 1946. At the same time, the commission noted that the average hourly wage paid by the western carriers last November was 70.7 per cent higher than that paid in 1939. Large increases in the cost of fuel and supplies also were cited.

Turning to the southern roads, the commission's report revealed that the coach fare revenues of nine of the 11 petitioning carriers declined from \$107.1 million in 1944 to \$62.2 million in 1946 and to \$34.6 million for the first 9 months of 1947. It also observed that the average wage paid by Class I roads in the Southern region during the first eight months of 1947 was 56.5 per cent higher than that paid in 1940.

The commission attributed the "very favorable results" of the petitioners' passenger-train operations during the war years to the "large and unprecedented" volume of travel by government representatives and military personnel and their families. It added, however, that most of that travel has disappeared and "cannot be expected to recur in peacetime years."

**An Intrastate Case.**—The commission also found that the application of intrastate coach fares within Illinois by the Chicago, Aurora & Elgin, one of the western petitioners, on a lower basis than approved for interstate application over its line and the lines of the other petitioners will result in undue and unreasonable advantage, preference and prejudice, as between persons in interstate commerce, on the one hand, and in intrastate commerce, on the other hand.

The C. A. & E., by virtue of a federal court decree, has been maintaining one-way fares in coaches on the same basis (2.2 cents per mile) as maintained by the petitioners serving Illinois under the commission's outstanding orders. It asked the commission to require continuance of that parity by exercising its power under section 13(4) of the Interstate Commerce Act.

"This petitioner has no recourse in the premises except to appeal to this commission, as it cannot apply to the state regulatory body because of the 2-cent statutory maximum, nor to the court, because it is no longer in receivership," the commission said in part. "The evidence clearly shows that intrastate fares over its line on a lower basis than herein approved would result in unwarranted and substantial person-locality and revenue discrimination in favor of intrastate travel and against interstate travel. This railroad is the only petitioner located in a state with a statutory maximum of less than

2.5 cents, which does not have the benefit of an outstanding intrastate order from this commission."

Commissioner Splawn, concurring in part with the commission's decision, held that the record does not provide adequate or legal basis for the findings which authorize increases in intrastate fares. He particularly disagreed, he said, with the finding that the increased fares for intrastate application within the respective states mentioned "will be just and reasonable for the future" and the findings with respect to intrastate fares in Illinois maintained by the C. A. & E.

"This commission," he wrote, "has no power to fix reasonable passenger fares as such for intrastate application within any state. On the contrary, it is now well settled, first, that the power of this commission with reference to intrastate fares is dominant only so far as necessary to alter fares which injuriously affect interstate commerce, and second, that the mere existence of a disparity between particular intrastate and interstate fares does not warrant this commission in prescribing intrastate fares."

#### North Western to Place Safety Lights on All Suburban Trains

Sixty-six suburban trains of the Chicago & North Western have been equipped with Mars rear-end oscillating warning lights, and it is the intention of the North Western to have all of its suburban trains equipped with these safety lights by the end of this week, L. L. White, vice-president in charge of operations, announced on February 16.

Developed by the North Western in conjunction with the Mars Signal Light Company, the rear-end red light auto-

matically turns on when the engineer reduces air pressure to apply the brakes. The red light oscillates in a figure "8" and its rays are visible at great distance, even around curves. Some of the new lights, in addition to the red light, will have an alternate white light for use when trains are backing up for any considerable distance, it was stated.

"This is one of the most effective safety devices yet developed for railroad use," Mr. White said. "It has been a very valuable aid on our through trains and will be a supplementary safety factor in suburban service."

Nearly all of the North Western's through trains are equipped with the red rear-end warning light, Mr. White stated. In addition, all Diesel-electric freight and passenger locomotives and a number of steam locomotives are equipped with a head-end oscillating light which flashes a brilliant white light in the form of a figure "8" when the train is in motion and automatically changes to a red figure "8" when the train is stopped in an emergency.

Mr. White said that, since its inauguration, this emergency red warning light has been credited with preventing two side collisions in multiple-track territory. The oscillating white light, he added, is of real benefit in preventing crossing accidents involving highway traffic for the reason that it is more likely to attract the attention of motorists than is the straight beam light.

#### Benefit Payments Remain High

Retirement and survivor benefit payments by the Railroad Retirement Board remained at a high level during November, with payments of all types amounting to \$18,997,000, according to the January issue of the board's "Monthly



**RAILWAY MEN HONORED FOR WAR SERVICES.**—At the investiture at Rideau Hall in Ottawa February 11, Viscount Alexander, governor-general of Canada, bestowed the insignias of Companions of the Most Distinguished Order of St. Michael and St. George, and Commanders of the Civil Division of the Most Excellent Order of the British Empire upon five Canadian railway men in recognition of their services during World War II. Reading from left to right: E. W. MacKinnon, C.B.E., retired superintendent of the Prince Edward Island division, Canadian National; Maynard A. Metcalf, C.B.E., vice-president and executive assistant, Canadian National; Walter S. Thompson, C.B.E., director of public relations, Canadian National and Trans-Canada Air Lines; S. J. Hungerford, C.M.G., former president Canadian National and National Railways Munitions; and Robert Charles Vaughan, C.M.G., chairman and president, Canadian National



Review." The 16,270 new awards for the month included 3,998 retirement annuities and 12,272 monthly or lump-sum survivor benefits.

Activities of the board in connection with unemployment compensation dropped considerably during November, as compared with the preceding month, due in part to a shorter work month and to the board's intensified efforts to place claimants in suitable jobs. Applications and claims were, respectively, 28 and 24 per cent fewer, and the number of new beneficiaries decreased by almost one half, to 9,286. Payments for 72,318 claim periods totaled \$2,094,000.

A decline in sickness benefit payments was also experienced in November, during which benefits amounting to \$1,986,000 were paid to 31,192 disabled railroad workers for illness or injury. An additional \$143,000 was paid to 1,131 maternity beneficiaries.

### New "Olympian Hiawatha" Schedule

To provide additional connections with trains arriving in Chicago from cities in the East and South, the "Olympian Hiawatha" of the Chicago, Milwaukee, St. Paul & Pacific will depart westbound from Chicago to the Pacific Northwest two hrs. later than at present, effective on February 22. The train will leave Chicago at 3:30 p. m. and operate on a two-hr. later schedule along its entire route. There will be no change in the eastbound schedule.

### Amended RR Reorganization Bill Reported by Senate Group

The Senate committee on interstate and foreign commerce this week reported to the Senate an amended version of the House-approved "Mahaffie" bill, H. R. 2298, to provide for the voluntary readjustment of railroad financial structures. Among other changes, the amendments added provisions making the bill's procedures applicable to some roads already in the hands of the courts, but such provisions are more restrictive than previous proposals along that line, being the result of a compromise reached by committee members of different views on the matter.

As passed by the House and reported to the Senate last year, H. R. 2298, sponsored by Representative Wolverton, Republican of New Jersey, pertained solely to railroads not in the hands of the courts and embodied only the modification of mortgage terms. It proposed to re-establish in modified and amplified form the voluntary financial readjustment procedures of the former McLaughlin Act which expired in 1945. Meanwhile, S. 249, another "Mahaffie" bill, was introduced by Senator White, Republican of Maine, but it was eventually reported to the

Senate with amendments sponsored by Senator Reed, Republican of Kansas, and Senator Meyers, Democrat of Pennsylvania, to include certain railroads already in the hands of the courts. No action was taken by the Senate last year on either bill.

According to the Senate committee, the amended version of H. R. 2298, as now reported, meets the plea of such roads as the Boston & Maine and Missouri-Kansas-Texas in that it provides for the modification of stocks as well as bonds. The modifications permitted by the bill would require approval of the Interstate Commerce Commission and assent by holders of 75 per cent of the principal amount or number of shares of each class of securities affected.

The bill, which, the committee said, has the approval of the commission, railroads, and security holders, now provides that only those railroads in bankruptcy or receivership on the date of its enactment may adopt the voluntary reorganization program. This would exclude, the committee said, such roads as the Chicago, Rock Island & Pacific, the New York, New Haven & Hartford and the Central of Georgia, which have completed their reorganizations. Although the committee observed that the procedure could be applied by 14 roads now undergoing reorganization under section 77 of the Bankruptcy Act and six in equity proceedings, it said that few, if any, are expected to take advantage of it.

The committee said that the bill, as reported, provides that a railroad cannot take advantage of the voluntary program if an order has been entered confirming the sale of its property or if a court order confirming a plan of reorganization under section 77 has been entered. A railroad, it said, must have the permission of the court to follow the voluntary procedure, adding it must file assurances from holders of at least 25 per cent of the aggregate of all securities, including 25 per cent of the amount of all creditors' claims, that they approve the proposed modification. The reorganization roads which the former Reed-Meyers proposals covered would have had the readjustment procedures applied to them on a mandatory basis.

The amendments to the bill also stipulate that if the court grants permission to proceed with the voluntary settlement, the bankruptcy or receivership proceeding will be suspended until the commission has considered and acted upon a new plan, or until 12 months have elapsed following the filing of the application and no modification has been approved by the commission. Meanwhile, the court retains custody of the carrier's property. If a plan is approved by the commission and is satisfactory to the court, it terminates the bankruptcy proceedings.

Other amendments require the commission and the courts to consider any

changes or developments which have occurred since a reorganization plan under section 77 was approved by the commission and which were not provided for in the plan, and exemption from the Internal Revenue Code of the provisions for taxation on transfer or exchange of securities undertaken pursuant to the bill.

The Senate last week paved the way for the committee to report H. R. 2298 for the second time when, at the request of Senator Reed, it removed both that measure and S. 249 from its calendar and referred them back to the committee.

### Convict Two for Benefits Fraud

Two claimants for railroad unemployment insurance benefits were convicted recently by the federal district court at Jefferson, Tex., for making fraudulent benefit claims at a time when they were actually employed. Convicted under the terms of the Railroad Unemployment Insurance Act, both claimants were given jail sentences which were suspended, and were placed on probation for one year. The men were required to refund the money fraudulently collected to the Railroad Retirement Board. Any individual guilty of fraud under the Unemployment Insurance Act is subject to maximum penalties of one year in jail or a \$10,000 fine, or both.

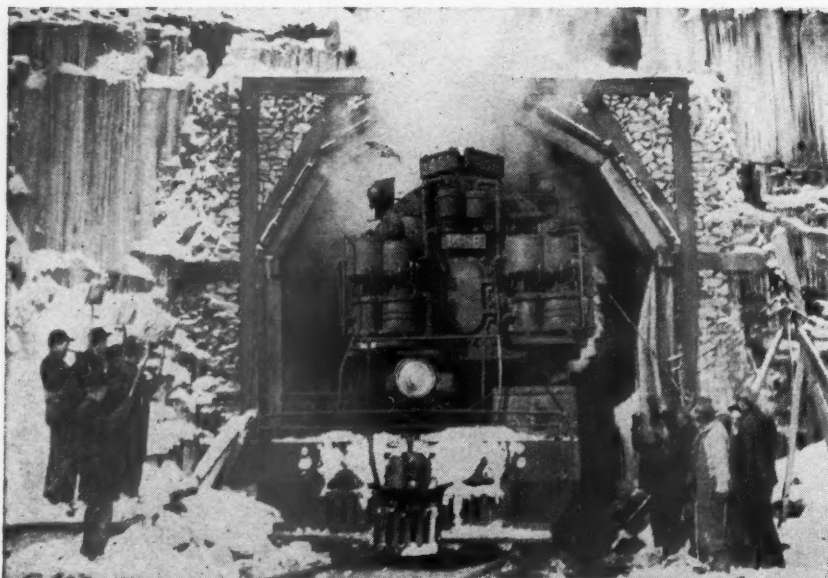
### Norfolk Southern Drops Passenger Business

The Norfolk Southern, following receipt of authority from the Virginia State Corporation Commission and the North Carolina State Utilities Commission, recently eliminated all passenger cars on its trains between Norfolk, Va., and Raleigh, N. C. The road, now completely out of the passenger-carrying business, will continue to operate the trains for mail and express service.

### C. of Ga. Coordinated Trucking Plan Approved by I.C.C.

Division 5 of the Interstate Commerce Commission has approved Central of Georgia plans for the establishment of a network of truck routes over which operations will be coordinated with its rail services for l. c. l. freight. The trucking operations will be conducted by the Central's subsidiary, the Central of Georgia Motor Transport Company, to which the division's report grants a certificate subject to the usual conditions designed to keep the highway operations auxiliary to rail service.

As proposed by Transport, the network would have covered 20 routes and seven alternate routes, ranging in length from 19 to 164 miles and aggregating "slightly more than 2,000 miles." The report otherwise described the proposed set-up as a "very compre-



Track workers salute the first train through the Chesapeake & Ohio's newest tunnel, a 3,622-ft. bore which crosses the Kentucky-Virginia state line through Pine mountain. The tunnel, part of a 14-mile extension from Jenkins, Ky., to new coal fields in Wise county, Va., will be placed in regular use February 29

hensive one," with the truck routes paralleling all lines of the Central and its subsidiaries, "excluding the line between Americus, Ga., and Columbus, certain branch lines, and parts of certain main lines, particularly between Savannah, Ga., and Millen, between Birmingham, Ala., and Childersburg, and between Montgomery, Ala., and Eu-  
faula."

The division refused to authorize operations on six of the proposed routes (mostly alternate routes) which would have totaled 333 miles in length; so the approved network will extend over approximately 1,700 route miles. The general plan of the coordinated service, the commission explained, "calls for transportation of l.c.l. traffic by rail between certain consolidation or break-bulk stations (key points) and by motor vehicle between those key-points and intermediate or way-stations."

In acting favorably on the proposal, the division refused to require the railroad to make its trucking arrangements with independent truckers, as had been proposed by American Trucking Associations, the Southern Motor Carriers Rate Conference, and other protesting motor-carrier interests. "The proposed service," the report said, "contemplates more than a mere interchange of traffic for joint movement over routes of connecting carriers. What Central desires and needs is a motor service on shipments exclusively in its custody and control."

With further reference to the contentions of the protestants, the division said it does not consider that "one competing carrier or class of carriers has a vested right in the continuance by another of an inefficient method of oper-

ation." This statement came after references to "convincing" evidence that the Centrals present l.c.l. service from and to way-stations "is slow, inefficient, and expensive, and is satisfactory neither to the railroad nor to the shipping public."

"The proposed coordinated motor-rail service is devised to improve that service," the report continued. "Central will not thereby enter a wholly new field of service, but . . . simply proposes to substitute a faster and more economical and efficient means for handling the l.c.l. traffic which it has been and is transporting, and which it is obligated to continue to transport."

#### Monorail System Described

At the February 19 meeting of the New York Railroad Club, Edward H. Anson, vice-president of Gibbs & Hill, Inc., consulting engineers, described the suspended monorail system of rapid transit for urban and interurban passenger transportation, promoted by the recently incorporated Monorailway Corporation, the president of which is Frank S. Lyon.

#### Erie Installing Radio System On 300 miles of Main Track

The Erie has begun installation of very-high-frequency radio-telephone equipment on its Kent, Mahoning and Meadville divisions to provide complete coverage over more than 300 miles of main-line trackage between Marion, Ohio, and Salamanca, N. Y., R. E. Woodruff, Erie president, has an-

nounced. Complete installation with full operation is expected by May 1, he said. The equipment used in the system is being delivered by the Farnsworth Television & Radio Corp.

All main-line Diesel-electric road locomotives operating over the three divisions will be radio-equipped. In equipping both cabs of 7 3-unit passenger and 9 4-unit freight locomotives, as well as 15 cabooses, a total of 47 mobile radio installations will be made. In addition, 14 wayside offices will be equipped to provide complete radio coverage and the plan also includes the use of "walkie-talkie" radio sets for head-end and rear-end communication on the trains.

#### Court Rules Against Separate South Carolina Corporation

The power of the Interstate Commerce Commission, under section 5 of the Interstate Commerce Act, to exempt railroads from state laws overrides those provisions of the constitution and statutes of South Carolina which require that companies operating railroads there must be incorporated under the laws of that state, the United States Supreme Court ruled on February 16. The ruling came in a unanimous opinion, announced by Justice Black, in a case involving an appeal of the Seaboard Air Line from a determination of the South Carolina Supreme Court.

The latter had held that the state's incorporation requirements must be met by the present Seaboard company which took over the properties last year as the road's 15½-year receivership came to an end. The reorganized company is incorporated in Virginia; and, in sanctioning the new set-up, the I.C.C. found that compliance with the South Carolina corporation laws would result in "substantial delay and needless expense," and "would not be consistent with the public interest."

The case reached the state court on the Seaboard's petition for an injunction to restrain the attorney general of South Carolina from attempting to enforce the state's corporation laws against it. The state court dismissed the complaint with a ruling that the I.C.C. had gone beyond its power; and the Seaboard then appealed to the Supreme Court. The latter held that the language of section 5 "very clearly reposes power in the commission to exempt railroads under a section 5 proceeding from state laws which bar them from operating in the state or impose conditions upon such operation."

Reference was also made to the state court's reliance on the last sentence of section 5(11) as a provision which it thought "negated a congressional purpose to empower the commission to relieve railroads from state laws such as South Carolina's." The sentence reads as follows: "Nothing in this sec-



tion shall be construed to create or provide for the creation, directly or indirectly, of a federal corporation, but any power granted by this section to any carrier or other corporation shall be deemed to be in addition to and in modification of its powers under its corporate charter or under the laws of any state."

"We see nothing in this sentence that detracts from the broad powers granted the commission by section 5," the Supreme Court said. "In fact, the language of the sentence appears to support the commission's power here exercised. Although the sentence bars creation of a federal corporation, it clearly authorizes a railroad corporation to exercise the powers therein granted over and above those bestowed upon it by the state of its creation. These federally conferred powers can be exercised in the same manner as though they had been granted to a federally created corporation. . . . Here, just as a federally created railroad corporation could for federal purposes operate in South Carolina, so can this Virginia corporation exercise its federally granted power to operate in that state."

### Washington Hearing in Bus Fare Probe Postponed to June 15

The Interstate Commerce Commission has set back to June 15 its scheduled March 1 hearing at Washington, D. C., with respect to its No. MC-C-550 investigation of bus fares. The hearing previously had been postponed from January 19 to March 1.

### December Accident Statistics

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for December and 1947's 12

months. The compilation, subject to revision, appears at bottom of page 4.

### J. T. Scott, Jr., Nominated For National Mediation Board

President Truman has submitted to the Senate the nomination of John Thad Scott, Jr., of Houston, Tex., to be a member of the National Mediation Board for the term expiring February 1, 1951. The three-man board has been functioning with two members since June, 1946, when George A. Cook resigned. Mr. Scott, who is 53 years old, is an attorney. He has served as a referee in several National Railroad Adjustment Board cases.

### Justice Department Assails More Wartime Rates

The Department of Justice continued to assail the railroads' wartime freight rates this week when it filed with the Interstate Commerce Commission two complaints seeking recovery for alleged overcharges on shipments of various commodities. One complaint, which names approximately 500 railroads as defendants, pertains to the rates charged on the wartime shipments of combat vehicles, such as armored cars, army tractor tanks and half tracks, while the other complaint, in which 19 western railroads are cited, pertains to the rates levied on iron and steel shapes, angles, bars and beams from a steel plant at Minnequa, Colo., to Los Angeles, Cal., Richmond, Portland, Ore., and other Pacific coast shipbuilding points.

With respect to the former complaint, the department asserted that the rates on combat vehicles should not have exceeded the rates on commodities possessing comparable transportation characteristics, such as road making implements. An appendix to the complaint set out representative transconti-

mental shipments of the combat vehicles which moved under rates ranging from \$2.02 to \$3.17 per 100 lb. Had they moved on the basis of rates sought in the complaint, the range would have been from \$1.54 to \$2.01 per 100 lb. According to J. F. Sonnett, assistant attorney general in charge of the anti-trust division, the complaint was filed at the request of the armed forces.

The department said that the complaint against the 19 western carriers was filed at the request of the United States Maritime Commission. It alleges in part that the charges on the traffic there involved, which were 85 cents per 100 lb., minimum 40,000 lb. and 60,000 lb., were unreasonable and unjust to the extent that they exceeded 65 cents, minimum of 90,000 lb.

Commenting on this complaint, Mr. Sonnett said that the defendant carriers "consistently refused" the government's attempts to obtain reasonable adjustments. The iron and steel articles named in the complaint were used in the wartime shipbuilding program.

As reported in *Railway Age* of January 10, page 68, hearings on four other government complaints against the railroads will be held at the Washington, D. C., offices of the Interstate Commerce Commission on April 26.

### I.C.C. Bureau Issues More Data on 1947 Traffic Flow

The Bureau of Transport Economics and Statistics of the Interstate Commerce Commission has issued six tables showing, on a one-per-cent-sample basis, the intraterritorial and interterritorial movements of freight traffic as represented by carload terminations reported by Class I railroads for the second quarter of 1947. The compilation is Statement No. 485 of the bureau.

It is in the same form as that presenting like figures for 1947's first quarter, which was described in detail in the *Railway Age* of January 10, page 43. The data are being taken from waybills submitted in response to the commission's September 6, 1946, order requiring Class I roads to file all audited waybills representing their carload terminations which are numbered "1" or with numbers ending in "01."

### Emergency Board Report

The White House has made public a report which President Truman received February 17 from the emergency board which he appointed to investigate a dispute between the Chicago North Shore & Milwaukee and certain of its employees represented by the Amalgamated Association of Street Electric Railway and Motor Coach Employees of America, American Federation of Labor.

The board recommended that the employees be given a wage increase of 15½ cents per hour, retroactive to September

| Item   | Month of December |       | 12 months ended with December |        |
|--|-------------------|-------|-------------------------------|--------|
|  | 1947              | 1946  | 1947                          | 1946   |
| Number of train accidents*   | 1,433             | 1,383 | 16,789                        | 15,556 |
| Number of casualties in train, train-service and nontrain accidents: |                   |       |                               |        |
| Trespassers:   |                   |       |                               |        |
| Killed   | 99                | 120   | 1,416                         | 1,542  |
| Injured  | 76                | 93    | 1,184                         | 1,161  |
| Passengers on trains:  |                   |       |                               |        |
| (a) In train accidents*  |                   |       |                               |        |
| Killed   | 1                 | 14    | 34                            | 65     |
| Injured  | 157               | 232   | 1,276                         | 1,586  |
| (b) In train-service accidents                                       |                   |       |                               |        |
| Killed   | 3                 | 1     | 32                            | 38     |
| Injured  | 261               | 273   | 2,872                         | 3,032  |
| Travelers not on trains:   |                   |       |                               |        |
| Killed   | 1                 |       | 10                            | 15     |
| Injured  | 145               | 116   | 1,006                         | 1,058  |
| Employees on duty:   |                   |       |                               |        |
| Killed   | 78                | 64    | 710                           | 672    |
| Injured  | 3,037             | 3,306 | 35,715                        | 38,325 |
| All other nontrespassers:**  |                   |       |                               |        |
| Killed   | 186               | 252   | 1,984                         | 2,030  |
| Injured  | 720               | 864   | 6,727                         | 6,845  |
| Total—All classes of persons:  |                   |       |                               |        |
| Killed   | 368               | 451   | 4,186                         | 4,362  |
| Injured  | 4,396             | 4,884 | 48,780                        | 52,007 |

\* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than \$150 to railway property.

\*\* Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

| Persons: | 1947 | 1946 | 1947  | 1946  |
|----------|------|------|-------|-------|
| Killed   | 184  | 228  | 1,794 | 1,851 |
| Injured  | 515  | 613  | 4,238 | 4,397 |

1, 1947. The employees had demanded an hourly increase of 20 cents.

With respect to the union's demands for changes in rules and working conditions, the board recommended three changes favoring the employees' position. It also recommended denial of one demand and submitted recommendations favorable to the workers on three proposed changes after suggesting certain modifications in favor of the railroad. Of the 15 rules changes originally demanded by the union, seven were either withdrawn or successfully mediated by representatives of the National Media-tion Board.

The board was composed of Chairman H. H. Schwartz, a former member of N. M. B., Russell Wolfe, of Philadel-phia, Pa.; and R. E. Stone, of Syracuse, N. Y.

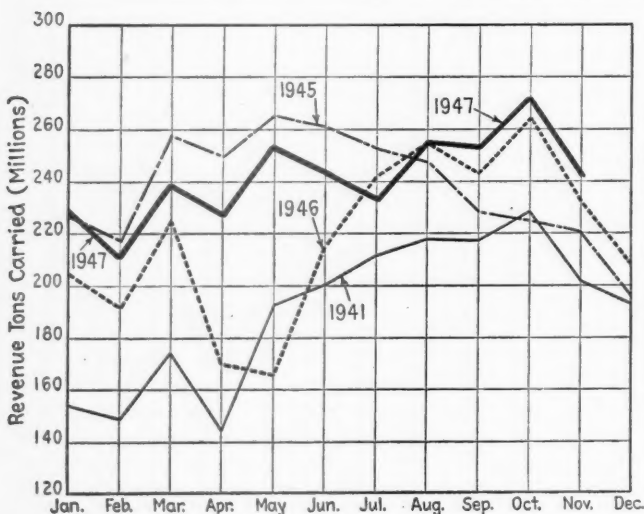
### Freight Car Loadings

Loading of revenue freight for the week ended February 14 totaled 734,262 cars, the Association of American Railroads announced on February 19. This was a decrease of 13,132 cars, or 1.8 per cent, below the previous week, a decrease of 65,715 cars, or 8.2 per cent, below the corresponding week last year, and an increase of 27,208 cars, or 3.8 per cent, above the comparable 1946 week.

Loadings of revenue freight for the week ended February 7 totaled 747,394 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., appears in the table.

#### Revenue Freight Car Loadings

| For the Week Ended Saturday, February 7 |         |         |         |
|---|---------|---------|---------|
| District                                | 1948    | 1947    | 1946    |
| Eastern .....                           | 135,885 | 144,377 | 135,823 |
| Allegheny .....                         | 151,715 | 163,453 | 127,507 |
| Pocahontas .....                        | 62,696  | 63,880  | 61,037  |
| Southern .....                          | 129,431 | 135,104 | 133,163 |
| N. Western .....                        | 83,095  | 72,622  | 75,714  |
| Can. West. ....                         | 122,471 | 123,856 | 118,623 |
| S. Western .....                        | 62,101  | 64,009  | 61,373  |
| Total W. Dist. ....                     | 267,667 | 260,487 | 255,710 |
| Total All Roads .....                   | 747,394 | 767,301 | 713,240 |



Revenue Tons and Revenue Ton-Miles—1947 Compared with 1941, 1945 and 1946

| Commodities:                  |           |           |           |
|-------------------------------|-----------|-----------|-----------|
| Grain .....                   | 39,042    | 47,304    | 50,844    |
| Livestock .....               | 9,765     | 11,276    | 18,348    |
| Coal .....                    | 174,387   | 176,348   | 186,166   |
| Coke .....                    | 14,768    | 14,366    | 8,244     |
| Forest .....                  | 40,251    | 47,963    | 35,588    |
| Ore .....                     | 12,567    | 11,295    | 5,878     |
| Mdse. L.c.l. ....             | 105,687   | 112,907   | 120,252   |
| Misc. ....                    | 350,927   | 345,842   | 287,920   |
| Feb. 7 .....                  | 747,394   | 767,301   | 713,240   |
| Jan. 31 .....                 | 727,038   | 835,051   | 723,301   |
| Jan. 24 .....                 | 771,992   | 821,928   | 708,554   |
| Jan. 17 .....                 | 811,286   | 828,060   | 749,443   |
| Jan. 10 .....                 | 831,447   | 830,953   | 772,888   |
| Cumulative total, 6 weeks ... | 4,571,195 | 4,770,721 | 4,320,404 |

**In Canada.**—Carloadings for the week ended February 7 totaled 73,189 cars as compared with 73,230 cars for the previous week and 65,241 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

|                               | Revenue Cars Loaded | Total Cars Rec'd from Connections |
|-------------------------------|---------------------|-----------------------------------|
| Totals for Canada:            |                     |                                   |
| February 7, 1948 ..           | 70,768              | 34,240                            |
| February 8, 1947 ..           | 65,241              | 35,752                            |
| Cumulative totals for Canada: |                     |                                   |
| February 7, 1948 ..           | 419,817             | 199,253                           |
| February 8, 1947 ..           | 399,273             | 213,485                           |

### Katy Seeks Aid in Securing Through Service to Mexico City

In what the Missouri-Kansas-Texas termed "a step further in the Katy's campaign to prevail upon the Missouri Pacific Lines to 'open' the southwestern gateway to Mexico," Raymond J. Morfa, board chairman, last week asked the Kansas City (Mo.) Chamber of Commerce to take sides in the dispute. As noted in the *Railway Age* of November 22, 1947, page 52, Mr. Morfa publicly charged the M. P. with maintaining a "stranglehold" on the 150-mi. link-line between San Antonio, Tex., and Laredo, thereby preventing other southwestern roads from offering through service to Mexico City, Mex.

In his statement to the board of directors of the Kansas City Chamber of Commerce, the Katy chairman proposed the inauguration of a new train service "sometime within the near future,"

whereby the present "Bluebonnet" out of Kansas City will operate through to San Antonio, via Dallas, Tex., instead of terminating at Dallas as it does now. The "Bluebonnet," he stated, would carry a sleeping car originating at Kansas City, which it would move through to San Antonio for connection with the M. P. and the National of Mexico to Mexico City. He expressed the hope that this arrangement will meet the M. P.'s approval inasmuch as the new service would have no through connection with the Katy's St. Louis train. He asked the Kansas City board to "help the Katy prevail upon the M. P. to co-operate" in putting the service into effect.

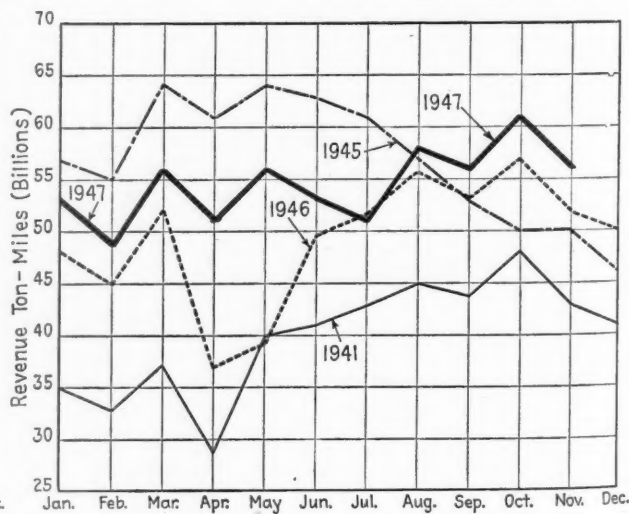
### I. C. C. Denies Post Office Request to Vacate Mail Pay Rise

Denying a petition filed by the Post Office Department, the Interstate Commerce Commission has refused to vacate and set aside its December 4, 1947, order which approved a temporary increase of 25 per cent in railroad rates for handling mail, effective February 1. The order also prescribed retroactive adjustments from February 1 back to February 19, 1947.

The Post Office Department's petition was outlined in *Railway Age* of January 31, page 62, while the railroads' reply was noted in the issue of February 7, page 63. The proceeding is Docket No. 9200.

### 3rd Quarter Loading Estimates in 1947 Were 1.1 Per Cent Low

The 13 regional Shippers Advisory Boards underestimated carloadings for the third quarter of 1947 by 1.1 per cent, according to the latest comparison of forecasts with actual loadings, issued by W. C. Kendall, chairman of the Car Service Division, Association of American Railroads. The variations by individual boards ranged from an over-estimate of 8.4 per cent to an under-





# Comparison National Forecast With Actual Carloadings—Third Quarter 1947

| Board             | Carloadings<br>Third Quarter 1947 |           | Percentage of<br>Accuracy |                    |
|-------------------|-----------------------------------|-----------|---------------------------|--------------------|
|                   | Estimated                         | Actual    | Over<br>Estimated         | Under<br>Estimated |
| Allegheny         | 1,192,920                         | 1,135,635 | 4.8                       |                    |
| Atlantic States   | 783,824                           | 901,686   |                           | 15.0               |
| Central Western   | 324,402                           | 318,270   | 1.9                       |                    |
| Great Lakes       | 677,014                           | 689,866   |                           | 1.9                |
| Mid-West          | 1,048,247                         | 1,024,354 | 2.3                       |                    |
| New England       | 119,392                           | 130,482   |                           | 9.3                |
| Northwest         | 802,595                           | 840,593   |                           | 4.5                |
| Ohio Valley       | 1,068,763                         | 1,023,185 | 4.3                       |                    |
| Pacific Coast     | 432,878                           | 396,323   | 8.4                       |                    |
| Pacific Northwest | 276,159                           | 276,935   |                           | 0.3                |
| Southeast         | 923,231                           | 899,968   | 2.5                       |                    |
| Southwest         | 545,150                           | 624,222   |                           | 14.5               |
| Trans-Mo-Kansas   | 478,270                           | 507,817   |                           | 6.2                |
| Total             | 8,672,845                         | 8,769,336 |                           | 1.1                |

estimate of 15 per cent, while the variations by commodities ranged from an overestimate of 24 per cent in the case of agricultural implements and vehicles, other than automobiles, to an underestimate of 127 per cent in metals, other than iron and steel.

The report shows that there were overestimates in 17 commodity groups and underestimates in 15. In addition to agricultural implements and vehicles, there were overestimates of 17.3 per cent in cotton and in cotton seed, soybean-vegetable cake and meal, except oil; 13.7 per cent in poultry and dairy products; 12.5 per cent in automobiles and trucks; and 11.9 per cent in lumber and forest products. Among the larger underestimates were 92.7 per cent in cotton seed, soybean-vegetable cake and meal, except oil; 71.4 per cent in chemicals and explosives; and 55.8 per cent in paper, paper board and prepared roofing.

The report also showed that the carloadings were overestimated in six board districts and underestimated in seven.

## Sees Railroads as Primary Anti-Socialization Forces

American railroads are the first line of defense against the socialization of American business and industry, George T. Carmichael, vice-president of the New York, New Haven & Hartford, told a meeting of the Eastern Railroad Treasurers in New York last week. He warned that attempts are being made, using "emergency situations" as an excuse, to institute government ownership of railroads. "If the railroads lose this battle," Mr. Carmichael said, "you may be sure that other industries will follow and our heritage of greatness founded on free enterprise will certainly be in a sorry state."

"I believe the railroads must make each important branch of their service self-supporting," he continued. "The traditional theory has been that carload freight service should produce practically all the net income. Less-than-carload freight, passenger, mail and express should each contribute something to the net income . . . or at least cover their share of all costs, including taxes

and rentals." The New Haven executive also recommended repeal by Congress of the 15-per cent passenger-transportation excise tax which, he said, was restricting passenger traffic. Mr. Carmichael reported, in addition, that the severe weather and snow since the latter part of December have cost the New Haven approximately \$2,500,000.

## C. & N. W. Installs New Phone System Between Chicago-Omaha

To provide more rapid and efficient telephone service between Chicago and Omaha, Neb., and principal intermediate points, the Chicago & North Western last week completed the installation of a new 489-mi. telephone system on its main line between these two cities. Begun a year ago by the communications and signal department of the road, the system is made possible by using carrier equipment on two existing wires, which provides three telephone circuits and 12 telegraph circuits. The carrier equipment for this installation was furnished by the Western Electric Company. R. L. Williams, president of the North Western, said a similar system is now being installed between Chicago and St. Paul, Minn.-Minneapolis, and will be placed into service late this year.

## Orders Rock Island to Drop Peoria-Davenport Truck Service

Division 5 of the Interstate Commerce Commission has ordered the Rock Island Motor Transit Company to discontinue what the division's report calls the "independent and direct all-motor service under motor carrier billing and motor carrier rates," which the Chicago, Rock Island & Pacific subsidiary has been conducting between Peoria, Ill., and Davenport, Iowa. The division's report in No. MC-C-406 passed upon a complaint of the Dohrn Transfer Company of Rock Island, Ill., which was supported by the Regular Common Carrier Conference of American Trucking Associations.

The Rock Island subsidiary did not deny that it was conducting the services

complained of, but it held that it was authorized to do so under its certificates covering the route. Among other arguments in support of this position, it contended that requirements of the certificates' conditions designed to keep the highway services auxiliary to rail operations were met if all points served by Transit's trucks were stations on the Rock Island, as are those on the Peoria-Davenport route. The division rejected the contention, supporting its position with citations from various reports in which the commission has dealt with auxiliary-to-rail-service matters.

The order accompanying the report requires discontinuance of the service on or before March 31. The report was made by Commissioners Rogers and Patterson. Commission Chairman Lee, the other member of Division 5, "was necessarily absent and did not participate."

## C. & O. Stockholder Jackson Can Argue in N. Y. C. Case

George S. Jackson, of 230 West End avenue, New York, a Chesapeake & Ohio stockholder whose criticisms with respect to various policies and activities of that road and the Federation for Railway Progress were reported in the *Railway Age* of January 31, page 50, has been authorized by the Interstate Commerce Commission to intervene in pending cases involving the proposed tie-up of the New York Central with the C. & O. The intervention was authorized in an order by Commissioner Mahaffie, and it permits Mr. Jackson to participate in the forthcoming oral argument and in future proceedings in the cases.

The cases, which have been set for oral argument at Washington, D. C., on February 27, involve the petition of C. & O. and Alleghany Corporation for release of the former's 400,000 shares of N. Y. C. stock from trusteeship, and applications of Robert R. Young and Robert J. Bowman, chairman and president, respectively, of the C. & O., for authority to serve on the N. Y. C. board of directors while continuing to hold C. & O. directorships and their present positions with that road. Denial of the petition and applications has been recommended in a proposed report which the commission has received from Assistant Director C. E. Boles of its Bureau of Finance (see *Railway Age* of December 13, 1947, page 64).

## January Revenues 8.5 Per Cent Above Those in 1947

From preliminary reports of 83 Class I railroads, representing 81.7 per cent of total operating revenues, the Association of American Railroads has estimated that the January gross amounted to \$607,642,652, an increase of 8.5 per cent above the \$560,241,344 reported for the same 1947 month. Estimated Jan-

uary freight revenues were \$496,511,662, as compared with \$448,637,139, an increase of 10.7 per cent, while estimated passenger revenues were \$65,417,738, as compared with \$68,225,061, a decrease of 4.1 per cent. The estimate for all other revenues was \$45,713,252, as compared with \$43,379,144, an increase of 5.4 per cent.

### Court Denies Chicago Roads Order Allowing Rise of Commuter Fares

The state superior court at Chicago last week refused to grant the Illinois Central and Chicago & North Western a temporary injunction to restrain the Illinois Commerce Commission from blocking a 20 per cent increase in commutation fares, sought by the railroads since December, 1947. The I. C. and the North Western, along with 10 other Chicago roads furnishing commuter service, were granted a temporary 10 per cent increase in such fares on November 1.

The court held that it could not be used to "by-pass" the commission, and emphasized that the state body had not actually refused to grant the increase. Following the court's ruling, Joseph Wright, attorney for the I. C., wrote a letter to the commission in which he asked for prompt action on the road's request for a temporary 20 per cent increase in commutation fares, which is in addition to the previously granted 10 per cent boost. The request for temporary relief has been under advisement by the commission since December 23, 1947.

Meanwhile, hearings are continuing before the commission at Chicago on petitions for a permanent increase totaling 30 per cent. In addition to the I. C. and the North Western, the 30 per cent raise is being asked by the Chicago, Milwaukee, St. Paul & Pacific and the Chicago, Burlington & Quincy. The remaining Chicago commuter roads have requested a 25 per cent increase.

### Representation of Employees

The Utility Service & Maintenance Workers Union, Utility Workers Union of America-Congress of Industrial Organizations, has replaced Local No. 22411, Railway Patrolmen's Union, American Federation of Labor, as the representative of patrolmen employed by the Hudson & Manhattan, and the Sheet Metal Workers International Association, operating through the Railway Employees' Department, A. F. of L., has supplanted the Bessemer & Lake Erie's Federated Shop Crafts as the representative of that road's sheet metal workers, including their helpers and apprentices, as the result of recent elections which have been certified by the National Mediation Board.

The N. M. B. also has certified that the Brotherhood of Supervision, Long Island, by virtue of a 69 to 18 victory over the American Railway Supervisors

Association, Inc., has retained its right to represent foremen, assistant foremen, gang foremen and cab signal inspectors employed in the L. I.'s maintenance of equipment and electrical traction departments. As the result of other elections in which representation rights were retained, the United Steelworkers of America, C.I.O., defeated the Order of Railroad Telegraphers to remain as bargaining agent for tower and telegraph employees of the Union, and the Order of Railway Conductors of America, which defeated the Brotherhood of Railroad Trainmen, will continue to represent road conductors employed by the Chicago South Shore and South Bend.

The B. of R. T., meanwhile, has been certified to represent locomotive engineers, road conductors and road trainmen employed by the Jamestown, Westfield & Northwestern. These employees formerly were without representation.

### CAR SERVICE

I. C. C. Service Order No. 793, which authorizes substitution of refrigerator cars for box cars ordered to handle fruit and vegetable containers and box shooks from certain Arkansas and Texas points to the Rio Grande valley, has been modified by Amendment No. 1, which set back the expiration date from February 20 to April 20.

I. C. C. Service Order No. 760, which authorizes the Chicago, Burlington & Quincy to operate over Chicago Great Western tracks because of washouts on the Burlington's Des Moines-Osceola branch, has been modified by Amendment No. 2, which set back the expiration date from February 15 to August 15.

The I. C. C. has denied a petition wherein the Liquefied Petroleum Gas Association asked that privately-owned tank cars containing privately-owned fuel on privately-owned sidings be exempted from Revised Service Order No. 798 which makes loaded private tank cars on private tracks subject to demurrage rules.

The Office of Defense Transportation has issued Special Allocation Order ODT, R-3, Revised, which became effective February 14. It requires owners or users of tank cars to furnish up to 2 per cent of the number of all types of tank cars which were in their possession on February 13, when called for by O. D. T.'s agent at Chicago, Richard H. Lamberton, for the movement of emergency supplies of kerosene and fuel oils.

The Office of Defense Transportation has issued General Order ODT 16-C, Revised General Permit 1-C, which became effective February 20. It requires shippers of export freight to obtain an export license or clearance from the De-

partment of Commerce's Office of International Trade before the shipments are offered for rail movement.

The Office of Defense Transportation has issued Special Direction ODT 18-1, Amendment 9, which became effective February 20. Its effect is to require that carload shipments of asphalt in cartons must be loaded to a weight of not less than 80,000 lb.

### SUPPLY TRADE

E. H. Horstman, formerly assistant chief engineer of the steam turbine department of the Allis-Chalmers Manufacturing Company, has been appointed chief engineer; Hans P. Dahlstrand, formerly consulting engineer of that department has been appointed director of engineering; and Harold M. Schudt, who has served in the engineering department, tractor division, since 1939, has been appointed general manager of the Gadsden, Ala., works. The company also has announced the appointments of George H. Carden, formerly Washington, D. C., district office sales representative, as manager of the Baltimore, Md., district office and T. G. Smith, formerly sales representative in the New Orleans, La., office, as resident representative at Beaumont, Tex.

The John S. Barnes Corporation of Rockford, Ill., has announced the appointment of the H. E. Stone Supply Company, 2 East Haddon avenue, Oaklyn, N. J., as its sales representative covering metropolitan New York, New Jersey, Delaware, Maryland and the eastern half of Pennsylvania.

J. L. McDermott, formerly district sales representative for Joseph T. Ryerson & Son, Inc., at Pittsburgh, Pa., has been appointed Western sales manager of the Glyco-Ryertex division, with headquarters at Chicago.

John J. Hart, Jr., formerly assistant manager of the Feller engineering division of the Lake Erie Engineering Corporation, has been appointed sales manager of a recently formed division of the Watson-Standard Company, Pittsburgh, Pa.

Robert F. Johnston, formerly sales service engineer for the Eastern Stainless Steel Corporation, Baltimore, Md., has been appointed assistant general sales manager.

G. F. Clipsham has been appointed assistant to the president of the Lincoln Electric Company. Mr. Clipsham joined the company in 1929, at Cleveland, Ohio, and since 1935 until his recent return to the United States, he was president of the Welwyn Garden City, Herts, England, office.

The Pennsylvania Refining Company, Cleveland, Ohio, has announced the appointment of the Mohawk Supply Company, 1925 West Lafayette boulevard, Detroit,



as authorized Penn Drake Gumout distributor in the Detroit area.

Paul E. Lunquist, formerly design engineer for the Chicago Bridge & Iron Co., has joined the Thomas Machine Manufacturing Company of Pittsburgh, Pa., as sales engineer and special field representative.

H. H. Bullen, sales representative of the American Steel & Wire Co., has been appointed manager of western district electrical products sales, covering 14 states, with headquarters as before at Chicago.

The Edgar T. Ward's Sons Company Division of Columbia Steel & Shafting Co. has announced the sale, on February 6, of the physical assets of its Chicago warehouse to Lapham-Hickey Company of Chicago. Lapham-Hickey Company has also been appointed sales agent for Summerill Tubing Company Division in Illinois and northern Indiana.

## OBITUARY

Louis G. Vock, district sales manager of the Metal & Thermit Corporation's welding division, with headquarters at Chicago, died in the Wesley Memorial hospital in that city on January 26, after a prolonged illness.

James L. Lavalley, manager of the railway traffic and sales department of the Texas Company, New York, died on February 12 at his home in White Plains, N. Y. He was 64 years old.

William Harty, executive vice-president of the Canadian Car & Foundry Co., died on February 12. He was 69 years old.

## ORGANIZATIONS

The Annual Meeting of the Purchases and Stores Division, Association of American Railroads, will be held at Chicago on June 28, 29, and 30, convening in the grand ballroom of the Palmer House at 10:00 a.m. on June 28.

The next meeting of the Railroad Enthusiasts, New York Division, will be held on February 25 at 7:45 p.m., in room 5928, Grand Central Terminal. M. Rene Montheard, assistant general representative of the French National Railroads, will be the guest speaker. His subject will be "The French National Railroads Today." A movie entitled "The Rehabilitation of the French Railroads" will be shown on the same program.

A meeting of the Railway Club of Pittsburgh has been scheduled for February 26 at the Fort Pitt hotel, Pittsburgh, at 8 p.m. John W. Barriger, president of the Monon, will present a paper entitled "A Railway Roundup." The

sound and color film "Up and Down the Monon" will be shown.

The Indianapolis Car Inspection Association will meet in the committee room of the Indianapolis Union Station on March 1 at 7 p.m.

The Great Lakes Regional Advisory Board will hold its 25th annual meeting on March 23 and 24 at the Hotel Commodore Perry in Toledo, Ohio. Participating in the silver anniversary meeting will be the seven living former presidents of the board and the only current board member who was present at the organizational meeting on June 26, 1923. The latter is Frank Larkin, traffic manager of the Woodville Lime Products Company at Toledo.

The Northern Indiana Chapter of the Railway & Locomotive Historical Society will hold its next meeting on March 9, in room eight at the Union Station in South Bend, Ind. John W. Barriger, president of the Chicago, Indianapolis & Louisville, will address the meeting, to be designated as "Monon Night."

The Southwest Shippers Advisory Board will hold its 77th regular meeting on March 4 and 5, at the Gunter Hotel in San Antonio, Tex.

## EQUIPMENT AND SUPPLIES

### C. & N. W. Marks \$123 Million for Improvements; to Buy 39 Diesels

The Chicago & North Western will purchase 39 Diesel-electric locomotive units of various types and 2,350 freight cars as part of its \$123,500,000 maintenance and improvement program during 1948. R. L. Williams, president, announced this week. Mr. Williams said the road's budget for capital improvements and acquisition of new equipment is \$45,890,000, of which amount \$10,240,000 will be spent for additions and betterments to roadway and fixed property, \$2,810,000 for improvements to existing rolling stock and \$32,840,000 for new equipment now on order or authorized to be placed on order.

The Diesel-electric units authorized for purchase are 18 switching, 15 1,500-hp. freight and six 2,000-hp. passenger. The road will also rebuild 500 steel hopper cars at its Winona (Minn.) shops, at a cost of \$1,660,000. Other items included in the 1948 budget, Mr. Williams stated, are: Construction of a Diesel locomotive service and repair shop at Proviso, Ill., at a cost of \$642,000; and the completion of its \$1,860,000 modern Diesel locomotive service and repair shop at Chicago and of its \$1,940,000 centralized traffic control project between West Chicago and Nelson, Ill. Construction on the latter two projects was started in 1947.

More than 130 mi. of 115-lb. rail and 222 mi. of out-of-face ballasting will be installed in high speed territory, according to the North Western president. A variety of improvements will be made to roadway, structures and equipment to provide improved service, promote safety and increase efficiency, he added.

## SIGNALING

The Baltimore & Ohio will install an all-relay electric interlocking at Brooks, Pa. The General Railway Signal Company will supply Type-K relays, Model-5D dual-control electric switch machines, color-position-light signals and other items of signal equipment to be used in this installation.

The Missouri-Kansas-Texas has placed orders with the Union Switch & Signal Co. for the necessary material to install absolute permissive block signaling on 105 mi. of single track between Denison, Tex., and Dallas, involving 147 Style-H-5 searchlight signals, 675 relays, 46 color-light switch indicators, with the necessary switch boxes, rectifiers, transformers and housings. The field installation work will be carried out by the regular construction forces of the railroad.

## PASSENGER CARS

The Atchison, Topeka & Santa Fe has placed orders for 56 lightweight sleeping cars. Twenty-seven 10 cabin-6 double bedroom cars will be built by the Budd Company and the American Car & Foundry Co. will construct 15 cars of the 4 compartment-4 bedroom-2 drawing room type, 13 of the 10 roomette-3 bedroom-2 compartment type and 1 of the 4 drawing room-1 bedroom-observation type. These new orders bring the number of lightweight cars on order for the Santa Fe to 72, receipt of which will expand the road's fleet of such cars to 486.

## ABANDONMENTS

Southern.—Examiner J. S. Prichard has recommended in a proposed report that Division 4 of the Interstate Commerce Commission authorize this road to abandon that portion of line from Rome, Ga., to a point near Gadsden, Ala., 50 miles.

Authority to abandon the line in 1943 was denied by Division 4 for the reason that sufficient trucking facilities were not available to move traffic in the territory during the war. Examiner Prichard asserted, however, that such a situation no longer exists, adding that so far as Rome and Gadsden are concerned, the record is "convincing" that they have no urgent necessity for the branch.

He continued, "the situation pre-

sented in this case is that of a line of railroad 50 miles long, lightly constructed, poorly maintained and operated at considerable loss, primarily for the benefit of a few small communities, the largest of which has only 600 inhabitants." At the same time, he said that the out-of-pocket losses from its operation for the years 1944 to 1946, inclusive, averaged \$59,019 annually.

## CONSTRUCTION

**Atchison, Topeka & Santa Fe.**—This road has awarded a contract to the Super Electric Construction Company of Chicago for the floodlighting of its yard at Argentine, Kan.

**Elgin, Joliet & Eastern.**—A \$31,150 contract for the construction of two communication towers at its yard in Joliet, Ill., has been awarded by this road to the E. L. Archibald Company of Chicago.

**New York, New Haven & Hartford.**—This road has authorized the installation of supervisory control equipment to replace control cables at anchor bridge No. 58, Oak Point, N. Y. The probable cost of this project is \$26,893.

**Norfolk & Western.**—This company has authorized the following projects, the probable costs of which are shown in parentheses: Modernization of the passenger stations at Wytheville, Va. (\$78,400), and at Suffolk, Va. (\$28,000); construction of a new interlocking plant at Walton, Va., and the installation of coded track circuits between Roanoke and Walton (\$473,000); extending the Rex, Ohio, passing siding, including the extension of signal controls, from Kenova, W. Va., to Rex (\$320,400); installation of additional signal protection from Naugatuck, Va., to Tunnel No. 1 and c. t. c. from Naugatuck to Millstone yard, W. Va. (\$134,000); extension of the Richlands, Va., passing siding and the installation of the necessary signals, including the Indian passing siding (\$83,000); installation of interlock switches between Lovitt avenue and Bridge No. 5, Norfolk, Va. (\$82,500); extension of c. t. c. for the Petersburg, Va., Belt Line (\$53,900); installation of power-operated switches for passing sidings at Alnwick, W. Va. (\$52,000); White (\$52,000) and Willmore (\$47,700); construction of a fireproof wash and locker room building at Portsmouth, Ohio (\$50,000); construction of a 3,285-ft. extension to the Russell creek branch at Virginia City, Va. (\$55,400); construction of team track facilities at Waynesboro, Va. (\$46,500); and the construction of a 3,220-ft. siding on Hanger spur, Buchanan branch, Buchanan county, Va. (\$35,500).

**Seaboard Air Line.**—This company has placed the following contracts, the ap-

proximate costs of which are shown in parentheses: To the Paul Smith Construction Company, Tampa, Fla., for the construction of a packing house at Parker, Fla. (\$135,000); to James F. Wellman, Winter Park, Fla., for the construction of a celery washing plant at Zellwood, Fla. (\$46,000), and to the Virginia Bridge Company, Roanoke, Va., for bridge spans to be installed at Ways, Ga. (\$33,000).

**Southern.**—This road has awarded a contract to the Johnson & Johnson Construction Co., Rome, Ga., for the construction of Diesel-electric locomotive repair facilities in the Pegram shop at Atlanta, Ga. The estimated cost of this project is \$113,000. In addition, authorization has been received for the following projects, the probable costs of which are shown in parentheses: Renewing a bridge over the Little Yadkin river near Donnah, N. C. (\$28,900); replacing an open-deck trestle with a creosoted ballast deck trestle near Okahola, Miss. (\$23,900); constructing a covered platform and laying new tracks at Cincinnati, Ohio (\$39,440); and installing facilities, including a 100,000-gal. steel storage tank, for fueling Diesel-electric locomotives, at Asheville, N. C. (\$30,100). All the authorized projects, except the one to be undertaken at Asheville, will be handled by railroad company forces. Part of the Asheville work will be done by company forces and part by outside contract.

**St. Louis-San Francisco.**—This road has applied to the Interstate Commerce Commission for authority to construct and operate a 1.23-mile extension to its so-called Mansfield branch from a point near Hackett, Ark. The line would serve mining developments.

**Virginian.**—This company has applied to the Interstate Commerce Commission for authority to construct and operate a 7.5-mile line, extending from a connection with its so-called Guyandot River branch near Gilbert, W. Va., thence along Gilbert creek and Horsepen creek. As reported in *Railway Age* of February 14, page 76, and January 24, page 64, the Norfolk & Western and Chesapeake & Ohio also have applied to the commission for authority to construct lines in the same coal-mining territory which the United States Coal & Coke Co. plans to develop.

**Western Pacific.**—Six improvement projects costing more than \$250,000 are in progress on this road, with the work on each being performed jointly by the railroad's own forces and private contractors. E. W. Barker of Salt Lake City, Utah, is the contractor on the following jobs (total cost of each, including company work, is shown in parentheses): Construction at Elko, Nev., of a 28-ft. by 88-ft. frame building, with concrete floor, to provide an office for

roundhouse foremen and a wash and locker room for shop and enginemen (\$23,343); building of Diesel locomotive fuel oil facilities and coach watering facilities at Winnemucca, Nev. (\$59,237); construction of Diesel locomotive fuel oil facilities at Wendover, Utah (\$26,500); and rehabilitation of the passenger depot at Elko, Nev. (\$73,134).

A steel frame warehouse, 40 ft. by 82½ ft., and an elevated concrete platform, 20 ft. by 99 ft., are being constructed at 26th & DeHaro streets in San Francisco, Cal., to be leased to C. J. Worth Drayage Company. This project, including the paving of driveway and sidewalk areas, will cost \$35,000. S. H. Koller of Crockett, Cal., contracted for the foundation work and the Moore Drydock Company is erecting the building. Another steel frame warehouse, 40 ft. by 120 ft., on concrete foundation, is being built at First and Magnolia streets in Oakland, Cal., to be leased to Motor Transport Terminals, Inc. The warehouse construction and other work in connection therewith, will cost \$39,000. The foundation work was contracted for by S. H. Kolder, and the building is being erected by the Independent Iron Works Company.

## FINANCIAL

**Baltimore & Ohio.**—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for \$4,000,000 of series X equipment trust certificates, the proceeds of which will be applied toward the purchase of 1,200 70-ton, open-top steel hopper cars, at an estimated unit cost of \$4,175, as outlined in *Railway Age* of January 31, page 66. The cars will be constructed by the Pullman-Standard Car Manufacturing Company. The certificates will be dated February 1 and will mature in 10 annual installments of \$400,000, starting February 1, 1949. The report also approves a selling price of 99.723 with a 2½ per cent interest rate, the bid of Salomon Brothers & Hutzler and associates, on which basis the average annual cost will be 2.56 per cent.

**Central of New Jersey.**—*Reorganization.*—The Interstate Commerce Commission has permitted the National Association of Railroad and Utilities Commissioners to intervene in the Finance Docket No. 12620 proceeding, pertaining to this road's reorganization. The petitioners advised the commission that they intend to advocate disapproval of article III in the plan of reorganization submitted by the so-called institutional group, which, according to the association, proposes to amend the charter



and franchise obligations of the railroad so that it will be under no obligation to operate suburban passenger service except on a contractual basis. Under the proposal the railroad may, if during any 24 months' period the operation of its suburban passenger service results in a net out-of-pocket loss in excess of \$1,000,000, discontinue portions of that service and make such rearrangements (including the elimination of stops, the closing of passenger stations and changes in the type and character of service afforded) as may be necessary to reduce such loss to an amount not in excess of \$500,000 yearly.

The association held that article III would be incompatible with the public interest, adding that there is no statutory authority for the inclusion, in a reorganization plan, of a provision purporting to relieve a debtor of amenability to state regulation as to its future operations. Approval of the article, the petitioners asserted, also would "necessarily impair" cooperative relationships between the state commission and the federal agency and would establish a precedent for similar curtailments of state authority in other states including the regulation of rates.

**Chicago, Milwaukee, St. Paul & Pacific.—Authorizes Interest Payment.**—The board of directors of this company has authorized the payment, on April 1, 1948, of interest for the year ended December 31, 1947, on its general mortgage 4½ per cent income bonds, series A, and general mortgage 4½ per cent convertible income bonds, series B. Pursuant to a lease indenture, the board has also authorized the payment, on April 1, 1948, of the contingent interest for the year ended December 31, 1947, on the first mortgage bonds of the Bedford Belt, on the first mortgage bonds of the Southern Indiana and on the first and refunding mortgage bonds and income bonds of the Chicago, Terre Haute & Southeastern. Payment of contingent interest will be at the full rate of 1½ per cent per annum.

**Chicago, Indianapolis & Louisville.—Interest Accruals on Bonds.**—The board of directors of this road on February 14 voted unanimously to pay, on April 1, 1948, interest accruals in full on its first and second mortgage income bonds.

**Chicago, Indianapolis & Louisville.—Equipment Trust Certificates.**—This road has applied to the Interstate Commerce Commission for authority to assume liability for \$1,800,000 of equipment trust certificates, the proceeds of which would be applied toward the purchase of the following equipment:

| Description and Builder  | Estimated Unit Price |
|--|----------------------|
| 100 70-ton all-steel hopper cars (General American Transportation Corp.)   | \$3,800              |
| 50 70-ton gondola cars (Greenville Steel Car Co.)                          | 5,450                |
| 300 50-ton all-steel gondola cars (Pullman-Standard Car Manufacturing Co.) | 3,650                |
| 100 50-ton all-steel box cars (Pressed Steel Car Co.)                      | 5,600                |

Fifty of the box cars will be equipped with Evans utility loaders, to be used for the loading of automobiles, at an estimated unit cost of \$1,850. The certificates will be dated April 15 and will be sold on the basis of competitive bidding.

**Chicago, Milwaukee, St. Paul & Pacific.—Equipment Trust Certificates.**—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for \$5,040,000 of series CC equipment trust certificates, the proceeds of which will be applied toward the acquisition of certain all-steel equipment estimated to cost \$6,798,971, as outlined in *Railway Age* of January 24, page 64, all of which will be constructed in the applicant's shops. The certificates will be dated February 1 and will mature in 20 semi-annual installments of \$252,000, starting August 1. The report also approves a selling price of 99.701 with a 2¼ per cent interest rate, the bid of Salomon Brothers & Hutzler and associates, on which basis the average annual cost will be approximately 2.31 per cent.

**Chesapeake & Ohio.—Equipment Trust Certificates.**—Division 4 of the Interstate Commerce Commission has authorized this company to assume liability for \$4,900,000 of 2 per cent equipment trust certificates, the proceeds of which will be applied toward the purchase of 1,500 freight cars and six 1,500-hp. Diesel-electric switching locomotives, at a total estimated cost of \$6,157,122, as outlined in *Railway Age* of January 31, page 66. The certificates will be dated February 15 and will mature in 10 annual installments of \$490,000, starting February 15, 1949. The report also approves a selling price of 99.108, the bid of Salomon, Brothers & Hutzler and associates, on which basis the average annual cost will be approximately 2.18 per cent.

**New York, New Haven & Hartford.—Equipment Trust Certificates.**—Division 4 of the Interstate Commerce Commission has authorized this company to assume liability for \$6,480,000 of equipment trust certificates, the proceeds of which will be applied toward the purchase of 90 streamlined passenger cars at an estimated total cost of \$8,640,000, as outlined in *Railway Age* of February 14, page 75. The equipment will be acquired from the Pullman-Standard Car Manufacturing Company. The certificates will be dated February 1 and will mature in 15 annual installments of \$432,000, starting February 1, 1949. The report also approves a selling price of 98.58466 with a 2½ per cent interest rate, the bid of Halsey, Stuart & Co. and associates, on which basis the average annual cost will be approximately 2.84 per cent.

**New York, Chicago & St. Louis.—Equipment Trust Certificates.**—This road has sold \$1,400,000 of equipment trust certificates to Halsey, Stuart & Co. and

associates on a bid of 99.256 for 2½ per cent obligations. The certificates were reoffered to the public at prices yielding from 1.40 per cent to 2.45 per cent, according to maturity. (See *Railway Age* of January 31, page 68.)

**Pennsylvania.—Equipment Trust Certificates.**—Division 4 of the Interstate Commerce Commission has authorized this company to assume liability for \$10,890,000 of series S equipment trust certificates, the proceeds of which will be applied toward the purchase of equipment estimated to cost \$14,932,000. The equipment, as outlined in *Railway Age* of January 31, page 68, includes three 6,000-hp. Diesel-electric freight locomotives, eight 6,000-hp. Diesel-electric passenger locomotives, 25 600-hp. Diesel-electric switching locomotives, 25 1,000-hp. Diesel-electric switching locomotives, three passenger cars and 600 freight cars. The certificates, part of an overall issue amounting to \$32,910,000, (see *Railway Age* of July 19, 1947, page 71), will be dated July 1, 1947, and will mature in 15 annual installments of \$726,000, starting July 1. The report also approves a selling price of 99.329 with a 2½ per cent interest rate, the bid of Salomon Brothers & Hutzler, and associates, on which basis the average annual cost will be approximately 2.48 per cent.

**Providence & Worcester.—Dividend Change.**—This company has declared a dividend of \$14 a share on the common stock, payable on March 12 to stockholders of record on February 27. The previous payment was \$2.50 a share on December 31, 1947.

**Southern.—Trackage Rights.**—Division 4 of the Interstate Commerce Commission has authorized the modification of an 1896 agreement under which the Southern uses the line and facilities of the Louisville & Nashville between Cumberland Gap, Tenn., and Middlesboro, Ky., approximately 4.3 miles. Under the amended agreement, the Southern's payments of interest, rental, maintenance and operating expenses will total approximately \$11,000 less per year. The largest single saving will result from discontinuance of use of the Middlesboro passenger station.

**Warrior River Terminal.—Merger.**—Hearing on the proposed merger of this road into the government-owned Inland Waterways Corporation will be held at the Washington, D. C., offices of the Interstate Commerce Commission on March 5. Examiner Albus will preside. The proposed merger was outlined in *Railway Age* of January 31, page 58.

## Dividends Declared

Boston & Albany.—\$2.00, payable March 31 to holders of record February 28.  
Canadian Pacific.—75¢, payable March 31 to holders of record February 23.  
Cincinnati Inter-Terminal.—4% preferred, \$2.00, semi-annually, payable August 1 to holders of record July 20.

Erie & Pittsburgh. — guaranteed, 87½¢, quarterly, payable March 10 to holders of record February 28.

Fort Wayne & Jackson. — 5½% preferred, \$2.75, semi-annually, payable March 1 to holders of record February 20.

Pittsburgh, Bessemer & Lake Erie. — 75¢, semi-annually, payable April 1 to holders of record March 15.

Providence & Worcester. — \$14.00, payable March 12 to holders of record February 27.

Virginian. — 62½¢, quarterly, payable March 25 to holders of record March 15.

Wheeling & Lake Erie. — common, 5½% conv. preferred, \$1.37½, payable May 1; 75¢, payable April 1 to holders of record February 20.

## Average Prices Stocks and Bonds

|   | Feb. 17 | Last week | Last year |
|---|---------|-----------|-----------|
| Average price of 20 representative railway stocks | 46.67   | 46.06     | 51.47     |
| Average price of 20 representative railway bonds  | 86.18   | 86.25     | 92.46     |

## RAILWAY OFFICERS

### EXECUTIVE

George T. Carmichael, whose appointment as executive assistant of the New York, New Haven & Hartford at New Haven, Conn., in addition to his duties as vice-president in charge of accounting, public relations, advertising and industrial development, was reported in the *Railway Age* of February 7, was born at New Haven on December 10, 1889. Mr. Carmichael attended the New Haven public schools and Yale Business College, entering railroad service in October, 1908, as clerk in the office of the auditor of disbursements of the New Haven. In March, 1914, he



George T. Carmichael

became chief clerk to statistical accountant and three months later he was appointed valuation auditor. Mr. Carmichael was appointed assistant to federal auditor in July, 1918; assistant to comptroller in March, 1920; and general auditor three months later. He became comptroller in November, 1934, and was appointed vice-president and comptroller in October, 1942. Mr.

Carmichael became vice-president in charge of the accounting, public relations, advertising and industrial development departments in March, 1947, which position he still holds in addition to his new appointment as executive assistant.

J. H. Poore, whose promotion to vice-president-assistant to the president of the Northern Pacific, at St. Paul, Minn., was reported in the *Railway Age* of January 31, was born on December 12, 1885, in London, England. Mr. Poore joined the N. P. in 1907 as a clerk in



J. H. Poore

the office of the auditor of freight receipts, and subsequently served as clerk in the land department, chief clerk in the right-of-way department and land assistant in charge of federal valuation of lands. Until his recent promotion he had held the post of executive assistant since 1920 and that of industrial commissioner since 1941.

Edward J. Gould, chairman of the executive committee of the board of directors of the Hudson & Manhattan, has been elected chairman of the board, with headquarters at New York, succeeding Col. Hugh A. Kelly, who will remain as a member of the board. David S. Fischman, who has been a director of the road for the last two years, succeeds Mr. Gould as chairman of the executive committee. Mr. Gould, a lawyer and native of New York, is a graduate of New York University; he has specialized in the law of trusts and equity and corporation matters for more than a quarter of a century. Mr. Fischman, while a director of the H. & M., has given special interest to the railroad's realty holdings. He is identified with large real estate and industrial activities in New York. His companies include David S. Fischman Associates, Inc., a realty operator, and Public Industries, Inc., engaged in general business.

Robert E. Teston, office manager of the chief operating office of the Central of New Jersey, has been appointed assistant to the chief executive officer at Jersey City, N. J. A native of Bound

Brook, N. J., Mr. Teston started his career with the Jersey Central on February 25, 1924, as a stenographer in the operating department and he subsequently was promoted to several positions in that department.

### FINANCIAL, LEGAL and ACCOUNTING

D. I. Grant and J. M. Young have been appointed assistant secretaries of the Canadian National at system headquarters, Montreal, Que. The new appointees succeed D. R. Gunn, retired on pension, and E. B. Hawken, recently promoted to superintendent of pensions and staff registrar. Mr. Grant was formerly solicitor at Toronto, Ont.

Harry A. Fathauer, chief claim agent of the New York Central system at New York, has been appointed assistant general claims attorney, with the same headquarters. Maurice N. Ray has been appointed chief claim agent at Detroit, Mich., to succeed Fred J. Miller, who replaces Mr. Fathauer at New York. Frank H. Lutton has been appointed chief claim agent at Boston, Mass., succeeding M. O'B. Campbell, deceased.

Evan J. Foulds, whose promotion to assistant general counsel of the Southern Pacific, at San Francisco, Cal., was reported in *Railway Age* of January



Evan J. Foulds

24, was born on August 26, 1889, at San Francisco, and received his law degree from the University of California. He became an attorney for the S. P. in 1911, and in 1933 was appointed general attorney, the position he held at the time of his recent appointment.

### OPERATING

Alfred E. Perlman, whose promotion to general manager of the Denver & Rio Grande Western at Denver, Colo., was reported in *Railway Age* of January 17, was born at St. Paul, Minn., on November 22, 1902, and was graduated from the Massachusetts Institute of Technology in 1923. He also took a course in railway transportation at the



Harvard School of Business Administration during the summer of 1930. He first entered railway service in 1918 with the Minneapolis, St. Paul & Sault Ste. Marie and served with various railroads during summer vacations from school. Following his graduation, Mr. Perlman entered the service of the Northern Pacific in 1923 as a construction draftsman. In 1924 he was made an extra-gang laborer and in 1925 he was appointed inspector of icing facilities at St. Paul. In 1926 Mr. Perlman was sent to Glendive, Mont., as assistant supervisor of bridges and buildings, and in November of the following year



Alfred E. Perlman

he was appointed roadmaster, with headquarters at Carrington, N. D., being transferred to Sandpoint, Idaho, in 1929, and to Staples, Minn., in 1930. In October, 1934, he was assigned to special duties in the office of the vice-president in charge of operations, and in the following month he was loaned to the Railroad division of the Reconstruction Finance Corporation, where he made studies of maintenance conditions on lines making applications for loans. In 1935 he was appointed assistant engineer maintenance of way of the Chicago, Burlington & Quincy, with headquarters at Chicago, and in 1936, he went with the D. & R. G. W. as engineer maintenance of way, with headquarters at Denver. On May 1, 1944, Mr. Perlman became chief engineer, the position he held at the time of his recent promotion.

Emmett A. Verell, terminal trainmaster of the Southern at Charlotte, N. C., has been promoted to superintendent of the Salisbury-Spencer terminals at Spencer, N. C., succeeding Walter C. Bledsoe, who has been transferred to the Atlanta terminal, with headquarters at Atlanta, Ga. Mr. Verell was born on August 31, 1900, at Richmond, Va., and entered the service of the Southern in May, 1916, as a call boy at Richmond. He subsequently served there as a clerk, agency collector, assistant accountant, cashier and general yardmaster, successively. In November, 1938, he was

promoted to terminal trainmaster at Spartanburg, S. C., being transferred to Charlotte in August, 1946.

Henry A. Parish, whose retirement as superintendent of the Chicago & North Western's Wisconsin division, with headquarters at Chicago, and of that road's Chicago passenger terminal, was reported in the *Railway Age* of January 17, was born on December 25, 1884, at Montfort, Wis. Mr. Parish began his railroad career in 1897 as a laborer on the Madison division of the C. & N. W. at Wales, Wis., and held positions later as telegraph operator, freight brakeman, freight conductor, yardmaster, assistant trainmaster and trainmaster. He held the last named position successively at Waseca, Minn., Council Bluffs, Iowa, and Chicago, and in 1929 was appointed assistant to general manager in charge of safety at Chicago. Mr. Parish became superintendent of the road's Iowa division at Boone, Iowa, in 1934, being transferred to the Galena division at Chicago in 1940. In 1942 he was appointed superintendent of the Wisconsin division and of the road's Chicago passenger terminal, which positions he held at the time of his retirement.

W. A. Hurley, assistant to general manager of the New York, New Haven & Hartford, has been appointed assistant general manager, with headquarters as before at Boston, Mass.

J. J. Peacock, assistant to general superintendent transportation of the Atlantic Coast Line at Wilmington, N. C., has been appointed general superintendent dining cars, with headquarters at Washington, D. C. J. B. Mashburn, trainmaster at Rocky Mount, N. C., has been appointed assistant to general superintendent transportation at Wilmington. F. A. Cooke, general superintendent dining cars at Washington, has been appointed assistant superintendent dining cars at Washington. H. S. Flippen has been appointed trainmaster of the Richmond district at Rocky Mount.

Charles W. Pates, trainmaster of the Southern system at Danville, Ky., has been appointed assistant superintendent, with headquarters at Somerset, Ky. Thomas D. Moore, Jr., track supervisor on the Eastern lines at Orangeburg, S. C., has been appointed trainmaster at Birmingham, Ala., succeeding Paul C. Shu. G. Clifford Branum has been appointed trainmaster of the Richmond division at Richmond, Va., succeeding Julian M. Ford, whose appointment as assistant to personnel officer at Washington, D. C., was reported in *Railway Age* of February 14, page 366.

Edwin E. Brown has been appointed trainmaster of the Southern at Birmingham, Ala., succeeding Maxwell E. Self.

William O. Horne, assistant superintendent of the Union Pacific at Kansas

City, Mo., has been promoted to superintendent there, succeeding Joel E. Mulick, who has been transferred to Omaha, Neb., as superintendent of the road's Nebraska division. W. C. Satterfield, assistant superintendent of the Wyoming division at Denver, Colo., has been promoted to superintendent of that division, with headquarters at Cheyenne, Wyo. Mr. Satterfield is succeeded at Denver by E. H. Bailey. C. E. Breternitz, formerly superintendent at Cheyenne, has been appointed assistant superintendent of the Nebraska division at North Platte, Neb.

## TRAFFIC

F. D. Bunsen, whose promotion to general freight agent of the Southern Pacific, at El Paso, Tex., was reported in *Railway Age* of January 17, began his railway career with the road in 1914 as a yard clerk in the El Paso yards. He held various positions in



F. D. Bunsen

the operating department until September, 1917, when he went into the army during World War I. He returned to yard service in 1920, and in 1926 was transferred to the freight traffic department. In succeeding years, Mr. Bunsen held various positions with the road, being appointed assistant general freight agent in 1946, which position he held until his recent promotion.

Ralph H. Gauker, traveling passenger agent of the Seaboard Air Line at Washington, D. C., has been promoted to district passenger agent, with the same headquarters.

John N. Steadwell, who has been a member of the Southern Classification Committee at Atlanta, Ga., for the last 30 years, has retired from active duty, after more than 60 years of service with Southern railroads.

L. R. Biven has been appointed assistant to freight traffic manager of the Atlantic Coast Line, with headquarters at Wilmington, N. C.

F. P. Soen, New England freight agent of the New York Central system at

Boston, Mass., has been appointed general coal freight agent, with headquarters at Cleveland, Ohio.

**Fred A. Carlson**, commercial agent of the Akron, Canton & Youngstown, with headquarters at Chicago, has been appointed general Eastern agent at New York, succeeding **L. H. Doty**, deceased. The title of Eastern traffic manager has been abolished.

**William Wallace**, whose promotion to assistant passenger traffic manager of the Chicago, Milwaukee, St. Paul & Pacific, at Chicago, was reported in *Railway Age* of January 17, was born at Aberdeen, S. D., on August 14, 1897. He entered railway service in 1919 as a stenographer-clerk for the Milwaukee at Aberdeen, being advanced to assistant cashier, dining car department, at Chicago, one year later. In 1922 Mr. Wallace was promoted to cashier, with the same headquarters,



**William Wallace**

and from 1925 to 1937 he served as a clerk in the general passenger agent's office and as city passenger agent at Chicago. His next post was that of traveling passenger agent at Detroit, which he held until January 1, 1946, when he was promoted to assistant general passenger agent at Seattle, Wash. He became general passenger agent at Seattle in April, 1946, and was serving in that capacity at the time of his recent promotion.

**B. A. Anderson**, city passenger agent of the Canadian Pacific at Minneapolis, Minn., has been promoted to general agent, passenger department, at that point.

**Harry F. Willis** has been appointed general agent of the Chicago, Burlington & Quincy at Peoria, Ill., succeeding **Frank W. Werner**, whose promotion to assistant fuel traffic manager at Chicago was reported in *Railway Age* of February 7.

**E. C. Potter**, formerly assistant to the general freight agent of the Chicago & Illinois Midland, has been appointed general agent of the Toledo, Peoria & Western at Chicago. **Harry C. Miller**,

formerly assistant to traffic manager of R. G. LeTourneau, Inc., at Peoria, Ill., has been appointed general agent at Denver, Colo.

Effective February 16, the following changes took place in the freight traffic department of the Pennsylvania: **Henry W. Large**, freight traffic manager at Detroit, Mich., promoted to general coal traffic manager at Philadelphia, Pa.; **Herbert M. Phillips**, general freight agent at Chicago, appointed to replace Mr. Large; **Christy G. Magruder**, assistant general freight agent at Philadelphia, promoted to general freight agent at Chicago, succeeding Mr. Phillips; **W. S. Merrick**, division freight agent at Cleveland, Ohio, appointed to succeed Mr. Magruder at Philadelphia; **William M. Hardt, II**, division freight agent at Cincinnati, Ohio, transferred to Cleveland, succeeding Mr. Merrick; and **Joseph A. Armento**, division freight agent at Washington, D. C., transferred to Cincinnati, succeeding Mr. Hardt.

**Harry Stockdale**, whose promotion to assistant freight traffic manager of the Canadian Pacific, with headquarters at Chicago, was reported in *Railway Age* of February 7, was born on April 18, 1903, at Lancaster, England, and was educated in the public schools in Winnipeg, Man. He entered railroad service with the C. P. in 1917 as a junior clerk



**Harry Stockdale**

in the office of the district freight agent at Winnipeg, and in 1925 became rate clerk in the same office. Mr. Stockdale advanced to chief clerk in 1926, traveling freight agent at Minneapolis, Minn., in 1928 and district freight agent for the C. P. and the Minneapolis, St. Paul & Sault Ste. Marie at Kansas City, Mo., in 1932. In 1936 he went to New York as general eastern agent for both roads, and during World War II he served with the army's engineer corps. He was promoted to general freight agent at Boston, Mass., in 1944, which position he held at the time of his recent appointment.

**E. E. Swanson**, district passenger agent of the Union Pacific at Detroit, Mich., will become general agent, passenger de-

partment, at Kansas City, Mo., on March 1, succeeding **E. M. Mattes**, who will retire on that date after a railroad career of 46 years. **Samuel Reinhardt**, general agent, freight department, with headquarters at Kansas City, will be transferred to Pittsburgh, Pa., succeeding **John D. Carter**, who will also retire on March 1. Mr. Reinhardt will be replaced at Kansas City by **Louis G. Stahl**, district freight agent at Washington, D. C.

**G. C. Mensing**, whose promotion to general freight agent of the Canadian Pacific at Detroit, Mich., was reported in *Railway Age* of February 7, began



**G. C. Mensing**

his railroad career with the C. P. in 1920 as a stenographer at Pittsburgh, Pa. He became traveling freight agent in 1924, and was appointed in 1938 to the post of district freight agent at Pittsburgh, which position he held until his recent promotion.

**T. E. Reuter**, whose promotion to general freight agent of the Canadian Pacific at Chicago, was reported in *Railway Age* of February 7, joined the



**T. E. Reuter**

C. P. in 1936 at Cincinnati, Ohio, as chief clerk in the district freight office. Later he was appointed traveling freight agent at Cincinnati, and in 1941 was promoted to district freight agent at



**P**ROBABLY no railroad man need be told that every carload of C & O's record-breaking tonnage moved behind steam.

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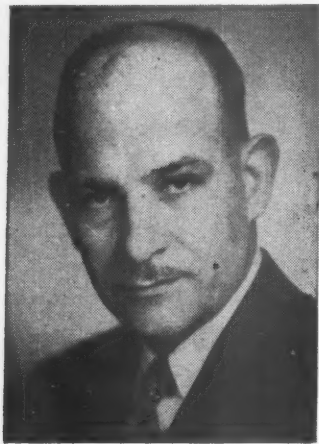
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Indianapolis, Ind. Early in 1947 Mr. Reuter became district freight agent at St. Louis, Mo., in which position he was serving at the time of his recent promotion.

### ENGINEERING and SIGNALING

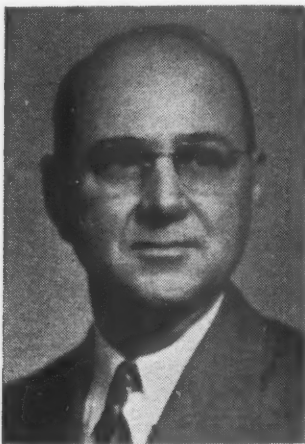
**William T. Elmes**, whose promotion to assistant chief engineer of the Pittsburgh & Lake Erie at Pittsburgh, Pa., was reported in *Railway Age* of January 17, was born at Beaver Falls, Pa., on June 23, 1904. He attended Pennsylvania State College, receiving his B.S. degree in 1926 and his C.E. degree in 1931. Entering railroad service in 1926



**William T. Elmes**

with the P. & L. E., he worked on concrete and steel design until 1936, when he became assistant supervisor track. In 1939 he became roadmaster of the P. & L. E. From 1943 to 1945 Mr. Elmes was chief engineer, 2nd Military Railway Service in the European theater, returning to the P. & L. E. in 1946 as research engineer.

**Elmer L. Grunawalt**, whose promotion to superintendent of communications of the Grand Trunk Western at Battle



**Elmer L. Grunawalt**

Creek, Mich., was reported in *Railway Age* of January 31, was born at Plymouth, Ind., on March 30, 1898, and received his higher education at Indiana State University. Mr. Grunawalt's

earlier career was spent in the service of the Western Union Telegraph Company, with which he held positions as groundman, lineman, inspector's clerk and inspector. In 1939 he joined the G. T. W. as chief inspector of telegraph and telephone services, which post he held at the time of his recent appointment.

**A. J. Anderson**, assistant division engineer of the Chicago, Milwaukee, St. Paul & Pacific at La Crosse, Wis., has been appointed division engineer of the Idaho division at Spokane, Wash., succeeding **W. E. Ross**, who has resigned to accept a position with Morrison-Knudsen Company, a contracting firm.

### MECHANICAL

**A. H. Glass**, chief motive power inspector of the Chesapeake & Ohio, at Hinton, W. Va., has been promoted to fuel supervisor, with headquarters at Richmond, Va., succeeding **J. D. Clark**, retired.

**R. J. Parsons** has been appointed assistant master mechanic of the New York Central, with headquarters at Harmon, N. Y.

### PURCHASES and STORES

**C. A. G. Blomquist**, whose appointment as assistant purchasing agent of the Central of Georgia at Savannah, Ga., was reported in the *Railway Age* of January 24, was born on June 6, 1891, at Savannah. Mr. Blomquist attended the public schools of Savannah and Georgia Institute of Technology. He studied bookkeeping and accounting with the International Business School and



**C. A. G. Blomquist**

accounting with the LaSalle Extension system, later taking a course in Business Administration with the Alexander Hamilton Institute. Mr. Blomquist entered railroad service on September 6, 1911, with the Central of Georgia as a clerk in the general storehouse at Macon, Ga., transferring to the local freight agency at Savannah in March, 1912, and to the comptroller's office at Savannah in September, 1912. He was appointed traveling auditor at Savannah

in July, 1914; stores accountant at Savannah in July, 1917; and chief clerk to purchasing agent at Savannah on October 15, 1932, holding the latter position at the time of his recent promotion to assistant purchasing agent. Mr. Blomquist is a member of Subcommittee, Division VI, Association of American Railroads.

**James C. Kirk**, whose promotion to general purchasing agent of the Chicago, Rock Island & Pacific at Chicago was reported in *Railway Age* of February 7, was born on December 1, 1884, at Storm Lake, Iowa. He entered the service of the road in 1904 as a laborer at Silvis, Ill., and subsequently held various clerical positions until 1906, when he was appointed district store-



**James C. Kirk**

keeper at Shawnee, Okla. He was transferred in 1910 to Silvis, where he became assistant general storekeeper in 1920 and general storekeeper in 1938. In the following year Mr. Kirk was appointed assistant purchasing agent at Chicago, which position he held at the time of his recent promotion.

**V. W. Mitchell** has been appointed district storekeeper of the Chicago, Burlington & Quincy at Sheridan, Wyo., succeeding the late **A. G. Runge**.

### SPECIAL

**Harry F. Tate, Jr.**, chief clerk in the public relations department of the Missouri-Kansas-Texas at St. Louis, Mo., has been appointed advertising agent at that point.

**John W. Cox**, whose appointment as personnel officer of the Southern at Washington, D. C., was reported in *Railway Age* of February 14, was born on June 15, 1902, at Ripley, Miss., and entered the service of the Southern in 1921 as a clerk in the agent's office at Birmingham, Ala. He was appointed timekeeper in the superintendent's office at Birmingham in May, 1924, and was promoted to chief timekeeper in June, 1928. In September, 1939, Mr. Cox became time inspector, with headquarters at Atlanta, Ga., and was appointed chief time inspector at Washington in



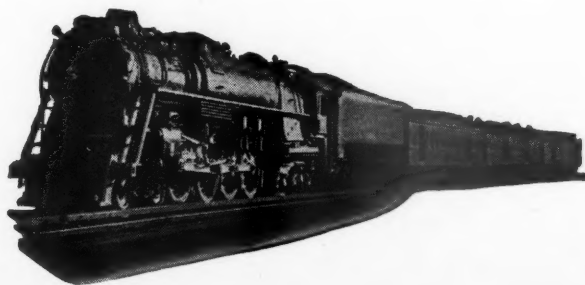
# Availability Up

## Maintenance Down

The installation of Security Circulators on any type of coal-burning steam locomotive means an increase in availability and a decrease in boiler maintenance.

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November, 1940. He was appointed director of personnel of the Kentucky & Indiana Terminal at Louisville in



**John W. Cox**

June, 1943. On October 1, 1944, he returned to the Southern as assistant personnel officer at Washington, which position he held until his promotion.

**Howard H. Smith**, whose appointment as assistant to vice-president of the Railway Express Agency, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of January 31, was born in La Moille, Ill. Mr.



**Howard H. Smith**

Smith's service with the company includes duty as superintendent at Portland, Ore., and Seattle, Wash., and western traffic manager at San Francisco, to which position he was appointed on June 1, 1936. He was promoted to general manager of the Mid-West department at Kansas City, Mo., on June 1, 1945, which post he held at the time of his recent appointment.

**R. P. Travis**, whose retirement as personnel officer of the Southern at Washington, D. C., was reported in *Railway Age* of February 14, was born at Fayetteville, Ga., on January 24, 1890, and entered the employ of the Southern as secretary to the superintendent at Atlanta, Ga., in November, 1922. He served as chief timekeeper on the Atlanta division from November, 1923, to May, 1929, when he was appointed

traveling time inspector, with headquarters at Washington. He left the employ of the Southern in August, 1939, to become an examiner for the National Railroad Adjustment Board at Chicago, from which board he resigned in 1942 to become director of personnel of the Kentucky & Indiana Terminal at Louis-



**R. P. Travis**

ville, Ky. On June 1, 1943, Mr. Travis was appointed personnel officer of the Southern at Washington.

**Grover Y. Reed**, newly appointed general manager of the Railway Express Agency's Texas department, with headquarters at Houston, Tex., was formerly assistant to vice-president, with headquarters at San Francisco, Cal., and not Houston, as was erroneously reported in the *Railway Age* of January 31. Mr. Reed, earlier in his



**Grover Y. Reed**

career, served as superintendent at Fort Worth, Tex., and in 1933 he headed the Southern Texas division at Houston. In 1940 he was appointed superintendent of organization at San Francisco, and five years later became assistant to vice-president there, the position he held at the time of his new appointment.

## OBITUARY

**Norman Bruce Pitcairn**, board chairman of the Wabash and president of the railroad until April, 1947, when he relinquished direct responsibility for the

road's operation, died of a heart ailment at his home in Clayton, Mo., on February 16. Mr. Pitcairn, 66, was elected president of the Wabash on January 1, 1942, and prior to that time had been co-receiver of the road since October, 1933. The accomplishments of the Wabash under his leadership were outlined in a feature article in *Railway Age* of May 3, 1947, which followed his election as board chairman, a position created at his own request.

Born at Harrisburg, Pa., on November 8, 1881, Mr. Pitcairn received his civil engineer's degree from Princeton University in 1903. He entered railway service on June 29, 1901, as a rodman on the Pennsylvania, and was promoted to transitman in 1904 and to assistant supervisor of track in



**Norman B. Pitcairn**

1905. Five years later he was further promoted to supervisor of track and on November 10, 1919, he was appointed division engineer on the Pittsburgh division, from which he was transferred to the Middle division in the following year, and then to the New York division in July, 1922. In October, 1923, Mr. Pitcairn was promoted to superintendent of the Erie & Ashtabula division and later served in the same capacity on the Middle and the New York divisions. In July, 1928, he became general superintendent of the Eastern Ohio division, which position he held until January, 1931, when he was elected president of the Detroit, Toledo & Ironton, with headquarters at Dearborn, Mich. He resigned from this position to become co-receiver of the Wabash. At the same time he was elected receiver and president of the Ann Arbor and president of the New Jersey, Indiana & Illinois, both Wabash subsidiaries. He was elected also a director of the Lehigh Valley.

**L. M. Dunn**, assistant traffic manager of the Elgin, Joliet & Eastern at Chicago, died on February 14, while en route from Arizona to his home in Joliet, Ill.

**A. C. Runge**, district storekeeper of the Chicago, Burlington & Quincy at Sheridan, Wyo., died in that city on January 31.





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With throttle and brake the engineman controls his locomotive and the train behind it, adjusting speed from a crawl to headlong rush or bringing thousands of momentum-impelled tons to any pre-determined halting spot. Comparable control is made possible by the air furnace process used in the man-

ufacture of Hunt-Spiller Gun Iron. The air furnace process is a leisurely one; it can be watched from beginning to end and closely regulated at every stage. Only when the "brew" is right is it ladled off and cast into many vital locomotive parts.

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# Freight Operating Statistics of Large Steam Railways—Selected

| Region, road and year  |                              |       | Locomotive-miles       |             | Car-miles            |         | Ton-miles (thousands) |                 | Road locos. on line          |                       |             |        |       |                |
|------------------------|------------------------------|-------|------------------------|-------------|----------------------|---------|-----------------------|-----------------|------------------------------|-----------------------|-------------|--------|-------|----------------|
|                        |                              |       | Miles of road operated | Train-miles | Principal and helper | Light   | Loaded (thousands)    | Per cent loaded | Gross excl. locos. & tenders | Net-rev. and non-rev. | Serviceable |        | B. O. | Per cent B. O. |
|                        |                              |       |                        |             |                      |         |                       |                 |                              |                       | Unstored    | Stored |       |                |
| New Eng. Region        | Boston & Albany              | 1947  | 362                    | 148,424     | 161,640              | 22,327  | 3,481                 | 63.5            | 225,325                      | 92,966                | 77          | 1      | 15    | 16.1           |
|                        |                              | 1946  | 362                    | 154,608     | 173,935              | 29,572  | 3,786                 | 63.5            | 241,888                      | 98,078                | 62          | 3      | 22    | 25.3           |
|                        | Boston & Maine               | 1947  | 1,745                  | 319,613     | 332,954              | 15,524  | 12,603                | 71.6            | 775,819                      | 338,826               | 99          | 4      | 13    | 11.2           |
|                        |                              | 1946  | 1,750                  | 333,442     | 344,347              | 13,569  | 12,807                | 71.3            | 784,621                      | 342,099               | 109         | 18     | 15    | 10.6           |
|                        | N. Y., New H. & Hartf*       | 1947  | 1,820                  | 335,957     | 644,298              | 38,423  | 13,938                | 73.6            | 813,515                      | 369,510               | 192         | 15     | 31    | 15.9           |
|                        | 1946                         | 1,815 | 386,914                | 524,493     | 45,934               | 15,429  | 73.2                  | 892,571         | 397,718                      | 189                   | 12          | 67     | 26.5  |                |
| Great Lakes Region     | Delaware & Hudson            | 1947  | 794                    | 284,608     | 348,854              | 36,019  | 12,948                | 72.7            | 898,944                      | 500,062               | 125         | 25     | 27    | 15.3           |
|                        |                              | 1946  | 795                    | 273,041     | 330,740              | 33,932  | 12,270                | 69.0            | 850,406                      | 446,703               | 132         | 53     | 20    | 9.8            |
|                        | Del., Lack. & Western        | 1947  | 970                    | 331,179     | 380,128              | 45,410  | 14,234                | 70.6            | 940,380                      | 433,296               | 111         | 7      | 20    | 14.5           |
|                        |                              | 1946  | 971                    | 323,984     | 367,203              | 45,707  | 14,208                | 71.5            | 914,371                      | 415,666               | 104         | 20     | 49    | 28.3           |
|                        | Erie                         | 1947  | 2,229                  | 779,973     | 835,248              | 67,344  | 39,154                | 67.6            | 2,536,306                    | 1,073,040             | 271         | 8      | 96    | 25.6           |
|                        |                              | 1946  | 2,228                  | 765,607     | 812,371              | 63,999  | 38,265                | 67.4            | 2,478,390                    | 1,067,094             | 276         | 17     | 98    | 25.1           |
|                        | Grand Trunk Western          | 1947  | 972                    | 293,317     | 302,406              | 2,721   | 9,219                 | 68.1            | 582,717                      | 250,769               | 65          | 1      | 9     | 12.0           |
|                        |                              | 1946  | 972                    | 266,319     | 271,122              | 2,091   | 9,162                 | 71.1            | 552,871                      | 237,947               | 69          | 1      | 7     | 9.1            |
|                        | Lehigh Valley                | 1947  | 1,239                  | 333,895     | 373,751              | 51,939  | 14,194                | 69.3            | 950,916                      | 463,744               | 106         | 6      | 52    | 31.7           |
|                        |                              | 1946  | 1,242                  | 315,846     | 352,950              | 59,197  | 14,711                | 71.3            | 988,696                      | 494,843               | 116         | 15     | 38    | 22.5           |
| Central Eastern Region | New York Central             | 1947  | 10,338                 | 3,422,205   | 3,660,693            | 244,842 | 125,633               | 64.5            | 8,623,835                    | 4,040,497             | 1,065       | 23     | 334   | 23.5           |
|                        |                              | 1946  | 10,326                 | 3,157,321   | 3,370,881            | 218,653 | 121,860               | 64.7            | 8,099,837                    | 3,655,905             | 1,007       | 21     | 380   | 27.0           |
|                        | New York, Chi. & St. L.      | 1947  | 1,656                  | 653,569     | 663,058              | 9,281   | 26,313                | 70.9            | 1,651,875                    | 738,794               | 152         | 4      | 14    | 8.4            |
|                        |                              | 1946  | 1,656                  | 602,132     | 605,849              | 8,169   | 25,641                | 70.9            | 1,570,739                    | 712,820               | 142         | 4      | 21    | 12.6           |
|                        | Pitts. & Lake Erie           | 1947  | 223                    | 105,358     | 106,270              | 42      | 4,248                 | 64.2            | 360,775                      | 210,622               | 27          | 2      | 15    | 34.1           |
|                        |                              | 1946  | 229                    | 95,152      | 96,912               | 16      | 3,713                 | 62.4            | 311,565                      | 176,436               | 24          | 11     | 15    | 30.0           |
|                        | Wabash                       | 1947  | 2,381                  | 672,871     | 688,883              | 15,440  | 24,619                | 72.2            | 1,547,212                    | 690,876               | 163         | 9      | 32    | 15.7           |
|                        |                              | 1946  | 2,381                  | 652,748     | 666,436              | 16,617  | 24,762                | 73.8            | 1,536,660                    | 705,039               | 158         | 9      | 41    | 19.7           |
|                        | Baltimore & Ohio             | 1947  | 6,100                  | 2,077,532   | 2,597,063            | 288,996 | 73,736                | 64.4            | 5,394,973                    | 2,697,182             | 855         | 2      | 280   | 24.6           |
|                        |                              | 1946  | 6,103                  | 2,027,995   | 2,515,980            | 275,448 | 70,482                | 66.3            | 4,915,027                    | 2,424,786             | 792         | 20     | 351   | 30.2           |
| Central Eastern Region | Central of New Jersey*       | 1947  | 418                    | 77,508      | 81,554               | 8,932   | 3,132                 | 68.0            | 230,844                      | 120,728               | 48          | 3      | 9     | 15.0           |
|                        |                              | 1946  | 419                    | 81,751      | 92,669               | 19,696  | 3,199                 | 69.5            | 226,571                      | 119,383               | 47          | 1      | 33    | 40.7           |
|                        | Central of Pennsylvania      | 1947  | 213                    | 77,650      | 90,062               | 15,638  | 3,146                 | 72.1            | 226,217                      | 113,142               | 40          | 2      | 16    | 27.6           |
|                        |                              | 1946  | 213                    | 81,395      | 95,714               | 20,611  | 2,877                 | 69.7            | 209,477                      | 111,809               | 38          | 7      | 29    | 39.2           |
|                        | Chicago & Eastern Ill.       | 1947  | 910                    | 178,003     | 178,681              | 3,436   | 5,698                 | 71.8            | 362,704                      | 187,487               | 58          | ..     | 14    | 19.4           |
|                        |                              | 1946  | 910                    | 175,687     | 176,726              | 3,949   | 5,172                 | 72.3            | 329,036                      | 160,983               | 59          | ..     | 18    | 23.4           |
|                        | Elgin, Joliet & Eastern      | 1947  | 391                    | 118,734     | 124,377              | 4,717   | 3,609                 | 68.3            | 274,412                      | 150,052               | 50          | 7      | 4     | 6.6            |
|                        |                              | 1946  | 391                    | 121,629     | 125,880              | 3,990   | 3,658                 | 66.1            | 278,575                      | 148,577               | 50          | 1      | 12    | 19.0           |
|                        | Pennsylvania System          | 1947  | 10,029                 | 3,894,662   | 4,393,643            | 582,427 | 155,609               | 67.2            | 10,862,100                   | 5,418,289             | 1,906       | 7      | 282   | 12.8           |
|                        |                              | 1946  | 10,033                 | 4,007,599   | 4,627,339            | 635,619 | 159,322               | 66.3            | 11,019,169                   | 5,339,587             | 1,818       | 135    | 286   | 12.8           |
| Central Eastern Region | Reading                      | 1947  | 1,355                  | 461,277     | 507,233              | 59,756  | 17,433                | 66.5            | 1,327,899                    | 733,566               | 225         | 16     | 36    | 13.0           |
|                        |                              | 1946  | 1,361                  | 495,271     | 551,042              | 63,796  | 16,687                | 66.5            | 1,257,038                    | 687,545               | 244         | 23     | 60    | 18.3           |
|                        | Western Maryland             | 1947  | 837                    | 233,322     | 281,145              | 39,876  | 8,024                 | 60.7            | 678,160                      | 372,043               | 156         | 5      | 13    | 7.5            |
|                        |                              | 1946  | 839                    | 185,087     | 214,898              | 26,788  | 6,250                 | 65.4            | 500,212                      | 277,202               | 142         | 8      | 12    | 7.4            |
|                        | Chesapeake & Ohio            | 1947  | 4,987                  | 1,778,176   | 1,906,958            | 91,287  | 76,349                | 58.1            | 6,388,861                    | 3,630,855             | 607         | 5      | 92    | 13.1           |
| Central Eastern Region |                              | 1946  | 4,980                  | 1,413,135   | 1,499,219            | 59,648  | 58,287                | 58.2            | 4,661,470                    | 2,497,909             | 584         | 4      | 99    | 14.4           |
|                        | Norfolk & Western            | 1947  | 2,107                  | 831,158     | 883,038              | 64,666  | 38,428                | 58.7            | 3,364,268                    | 1,857,426             | 264         | 25     | 25    | 8.0            |
|                        |                              | 1946  | 2,108                  | 654,613     | 697,693              | 46,541  | 29,621                | 60.5            | 2,408,807                    | 1,286,746             | 254         | 43     | 22    | 6.9            |
|                        | Atlantic Coast Line          | 1947  | 5,556                  | 891,382     | 917,084              | 13,887  | 24,352                | 66.2            | 1,614,300                    | 740,956               | 353         | 33     | 41    | 9.6            |
|                        |                              | 1946  | 5,554                  | 1,027,249   | 1,041,733            | 14,447  | 27,259                | 67.4            | 1,745,954                    | 784,154               | 386         | 33     | 35    | 7.7            |
| Southern Region        | Central of Georgia*          | 1947  | 1,782                  | 296,527     | 302,044              | 5,851   | 7,515                 | 71.5            | 485,165                      | 230,960               | 95          | 2      | 11    | 10.2           |
|                        |                              | 1946  | 1,782                  | 312,594     | 318,812              | 6,993   | 7,960                 | 72.0            | 518,129                      | 240,914               | 92          | ..     | 7     | 7.1            |
|                        | Gulf, Mobile & Ohio          | 1947  | 2,846                  | 381,933     | 391,534              | 1,158   | 17,238                | 75.8            | 1,092,454                    | 548,694               | 190         | 4      | 11    | 5.4            |
|                        |                              | 1946  | 2,846                  | 429,619     | 477,192              | 3,819   | 16,382                | 75.4            | 1,013,519                    | 484,320               | 181         | 20     | 43    | 17.6           |
|                        | Illinois Central             | 1947  | 6,581                  | 1,485,920   | 1,491,942            | 53,010  | 54,555                | 66.4            | 3,712,835                    | 1,757,738             | 570         | 12     | 72    | 11.0           |
|                        |                              | 1946  | 6,582                  | 1,452,898   | 1,467,144            | 52,019  | 56,427                | 68.8            | 3,679,320                    | 1,741,242             | 592         | 4      | 90    | 13.1           |
|                        | Louisville & Nashville       | 1947  | 4,756                  | 1,548,567   | 1,687,066            | 49,689  | 41,281                | 63.9            | 3,014,119                    | 1,583,096             | 398         | ..     | 80    | 16.7           |
|                        |                              | 1946  | 4,750                  | 1,425,270   | 1,550,322            | 39,697  | 36,411                | 65.8            | 2,506,837                    | 1,268,677             | 390         | 10     | 73    | 15.4           |
|                        | Nash., Chatt. & St. Louis    | 1947  | 1,052                  | 302,367     | 332,403              | 9,229   | 7,404                 | 74.3            | 470,050                      | 224,001               | 80          | ..     | 18    | 18.4           |
|                        |                              | 1946  | 1,053                  | 293,677     | 331,345              | 8,813   | 7,338                 | 78.6            | 434,837                      | 208,829               | 95          | ..     | 11    | 10.4           |
| Southern Region        | Seaboard Air Line            | 1947  | 4,145                  | 822,766     | 899,356              | 11,747  | 24,235                | 67.4            | 1,623,697                    | 742,600               | 287         | ..     | 59    | 17.1           |
|                        |                              | 1946  | 4,143                  | 888,481     | 959,831              | 14,990  | 27,157                | 70.8            | 1,755,108                    | 798,871               | 284         | ..     | 52    | 15.5           |
|                        | Southern                     | 1947  | 6,451                  | 1,789,623   | 1,818,325            | 31,666  | 47,967                | 69.9            | 3,065,178                    | 1,403,396             | 544         | 22     | 102   | 15.3           |
|                        |                              | 1946  | 6,450                  | 1,958,252   | 1,992,002            | 33,813  | 48,456                | 74.2            | 2,909,503                    | 1,321,124             | 595         | 3      | 103   | 14.7           |
|                        | Chi. & North Western         | 1947  | 8,055                  | 1,025,077   | 1,068,085            | 27,654  | 33,954                | 70.5            | 2,227,867                    | 1,018,620             | 364         | 6      | 106   | 22.3           |
| Northwestern Region    |                              | 1946  | 8,062                  | 1,035,394   | 1,070,461            | 28,655  | 34,997                | 71.1            | 2,227,141                    | 997,415               | 355         | 6      | 148   | 29.1           |
|                        | Chicago Great Western        | 1947  | 1,445                  | 259,111     | 260,526              | 10,638  | 9,444                 | 67.9            | 618,071                      | 269,333               | 63          | 3      | 20    | 23.3           |
|                        |                              | 1946  | 1,445                  | 281,238     | 283,039              | 14,052  | 9,197                 | 71.2            | 590,166                      | 262,911               | 69          | ..     | 11    | 13.8           |
|                        | Chi., Milw., St. P. & Pac.   | 1947  | 10,727                 | 1,519,039   | 1,595,570            | 68,457  | 51,297                | 68.4            | 3,401,050                    | 1,576,196             | 489         | 18     | 101   | 16.6           |
|                        |                              | 1946  | 10,725                 | 1,485,173   | 1,566,726            | 61,944  | 51,976                | 69.4            | 3,331,569                    | 1,530,591             | 493         | 23     | 101   | 16.4           |
|                        | Chi., St. P., Minneap. & Om. | 1947  | 1,606                  | 217,414     | 232,541              | 13,272  | 5,840                 | 73.9            | 382,431                      | 178,889               | 86          | ..     | 29    | 25.2           |
|                        |                              | 1946  | 1,606                  | 216,261     | 228,161              | 14,400  | 5,971                 | 74.3            | 386,744                      | 177,618               | 80          | ..     | 36    | 31.0           |
|                        | Duluth, Missabe & Iron Range | 1947  | 548                    | 117,767     | 118,077              | 1,146   | 5,308                 | 50.5            | 460,959                      | 263,404               | 61          | ..     | 1     | 1.6            |
|                        |                              | 1946  | 547                    | 110,720     | 111,758              | 919     | 5,371                 | 50.8            | 492,068                      | 295,858               | 44          | 2      | 1     | 2.1            |
|                        | Great Northern               | 1947  | 8,237                  | 1,219,199   | 1,228,766            | 48,457  | 44,552                | 63.1            | 3,179,877                    | 1,454,819             | 390         | 25     | 57    | 12.1           |
| Northwestern Region    |                              | 1946  | 8,236                  | 1,150,923   | 1,155,529            | 48,195  | 43,155                | 66.1            | 3,012,420                    | 1,406,597             | 386         | 32     | 96    | 18.            |



# Items for the Month of November 1947 Compared with November 1946

| Region, road and year                                  | Freight cars on line |         |         | Per Cent | G.t.m. per train-hr. excl. locos. and tenders | G.t.m. per train-mi. excl. locos. and tenders | Net ton-mi. per train-mile | Net ton-mi. per car-mile | Net ton-mi. per car-day | Car miles per car-day | Net daily ton-mi. per road-mi. | Coal lb. per 1000 g.t.m. inc. loco. | Mi. per loco. per day |
|--|----------------------|---------|---------|----------|---|---|----------------------------|--------------------------|-------------------------|-----------------------|--------------------------------|-------------------------------------|-----------------------|
|  | Home                 | Foreign | Total   |          |   |   |                            |                          |                         |                       |                                |                                     |                       |
| <b>New England Region</b>                              |                      |         |         |          |   |   |                            |                          |                         |                       |                                |                                     |                       |
| Boston & Albany .....                                  | 1947 209             | 5,035   | 5,244   | 0.3      | 23,976  | 1,524   | 629                        | 26.7                     | 585                     | 34.5                  | 8,560                          | 142                                 | 72.6                  |
| 1946 300   | 6,269                | 6,569   | 0.6     | 23,245   | 1,573   | 638   | 25.9                       | 507                      | 30.8                    | 9,031                 | 182                            | 85.9                                |                       |
| Boston & Maine .....                                   | 1947 1,360           | 11,020  | 12,380  | 2.3      | 37,105  | 2,436   | 1,064                      | 26.9                     | 903                     | 46.9                  | 6,472                          | 108                                 | 103.6                 |
| 1946 1,582   | 11,444               | 13,026  | 2.2     | 36,376   | 2,357   | 1,028   | 26.7                       | 848                      | 44.5                    | 6,516                 | 103                            | 90.6                                |                       |
| N. Y., New H. & Hartf .....                            | 1947 969             | 19,168  | 20,137  | 1.2      | 33,994  | 2,430   | 1,104                      | 26.5                     | 616                     | 31.6                  | 6,768                          | 81                                  | 98.0                  |
| 1946 1,352   | 19,872               | 21,224  | 1.8     | 32,342   | 2,313   | 1,030   | 25.8                       | 602                      | 31.9                    | 7,304                 | 93                             | 78.1                                |                       |
| <b>Great Lakes Region</b>                              |                      |         |         |          |   |   |                            |                          |                         |                       |                                |                                     |                       |
| Delaware & Hudson .....                                | 1947 1,581           | 7,458   | 9,039   | 4.9      | 57,477  | 3,172   | 1,765                      | 38.6                     | 1,803                   | 64.2                  | 20,993                         | 111                                 | 75.6                  |
| 1946 2,477   | 6,726                | 9,203   | 2.8     | 53,885   | 3,135   | 1,647   | 36.4                       | 1,535                    | 61.1                    | 18,730                | 113                            | 62.7                                |                       |
| Del., Lack. & Western .....                            | 1947 3,570           | 12,082  | 15,652  | 3.9      | 44,255  | 2,884   | 1,329                      | 30.4                     | 894                     | 41.6                  | 14,890                         | 114                                 | 111.8                 |
| 1946 4,093   | 13,929               | 18,022  | 3.6     | 44,271   | 2,861   | 1,300   | 29.3                       | 755                      | 36.1                    | 14,269                | 113                            | 89.0                                |                       |
| Erie .....   | 1947 5,083           | 24,769  | 29,852  | 4.3      | 53,426  | 3,273   | 1,385                      | 27.4                     | 1,121                   | 60.5                  | 16,047                         | 102                                 | 87.4                  |
| 1946 5,393   | 30,844               | 36,237  | 2.1     | 52,996   | 3,270   | 1,408   | 27.9                       | 963                      | 51.2                    | 15,965                | 99                             | 82.7                                |                       |
| Grand Trunk Western .....                              | 1947 3,875           | 10,837  | 14,712  | 6.0      | 38,483  | 1,998   | 860                        | 27.2                     | 567                     | 30.6                  | 8,600                          | 98                                  | 147.6                 |
| 1946 3,556   | 10,062               | 13,618  | 5.5     | 39,612   | 2,088   | 899   | 26.0                       | 560                      | 30.4                    | 8,160                 | 92                             | 131.6                               |                       |
| Lehigh Valley .....                                    | 1947 5,411           | 13,418  | 18,829  | 7.6      | 52,091  | 2,911   | 1,420                      | 32.7                     | 798                     | 35.3                  | 12,476                         | 112                                 | 89.2                  |
| 1946 4,509   | 14,805               | 19,314  | 3.3     | 52,615   | 3,225   | 1,614   | 33.6                       | 840                      | 35.0                    | 13,280                | 110                            | 85.7                                |                       |
| New York Central .....                                 | 1947 42,647          | 111,495 | 154,142 | 2.9      | 39,239  | 2,552   | 1,196                      | 32.2                     | 881                     | 42.2                  | 13,028                         | 115                                 | 103.0                 |
| 1946 42,769  | 105,765              | 148,534 | 3.4     | 39,482   | 2,595   | 1,171   | 30.0                       | 790                      | 40.7                    | 11,802                | 112                            | 96.7                                |                       |
| New York, Chi. & St. L. ....                           | 1947 1,971           | 14,477  | 16,448  | 1.4      | 48,340  | 2,538   | 1,135                      | 28.1                     | 1,523                   | 76.5                  | 14,871                         | 94                                  | 142.0                 |
| 1946 1,952   | 12,402               | 14,354  | 2.0     | 48,971   | 2,620   | 1,189   | 27.8                       | 1,631                    | 82.8                    | 14,348                | 90                             | 132.6                               |                       |
| Pitts. & Lake Erie .....                               | 1947 3,015           | 9,531   | 12,546  | 6.4      | 49,997  | 3,436   | 2,006                      | 49.6                     | 560                     | 17.6                  | 31,483                         | 104                                 | 80.7                  |
| 1946 2,422   | 9,793                | 12,215  | 2.7     | 47,918   | 3,286   | 1,861   | 47.5                       | 491                      | 16.6                    | 25,682                | 103                            | 70.1                                |                       |
| Wabash .....   | 1947 4,913           | 15,655  | 20,568  | 3.3      | 45,220  | 2,321   | 1,036                      | 28.1                     | 1,091                   | 53.8                  | 9,672                          | 115                                 | 120.3                 |
| 1946 5,133   | 14,750               | 19,883  | 2.6     | 45,086   | 2,379   | 1,092   | 28.6                       | 1,100                    | 52.3                    | 9,870                 | 111                            | 114.9                               |                       |
| <b>Central Eastern Region</b>                          |                      |         |         |          |   |   |                            |                          |                         |                       |                                |                                     |                       |
| Baltimore & Ohio .....                                 | 1947 38,849          | 52,614  | 91,463  | 5.0      | 32,332  | 2,655   | 1,328                      | 36.6                     | 989                     | 42.0                  | 14,739                         | 156                                 | 87.0                  |
| 1946 38,220  | 53,038               | 91,258  | 3.8     | 30,990   | 2,482   | 1,224   | 34.4                       | 907                      | 39.8                    | 13,244                | 154                            | 82.9                                |                       |
| Central of New Jersey* .....                           | 1947 694             | 9,493   | 10,187  | 3.5      | 38,981  | 3,080   | 1,611                      | 38.5                     | 394                     | 15.0                  | 9,627                          | 124                                 | 76.5                  |
| 1946 815   | 10,292               | 11,107  | 2.5     | 34,633   | 2,862   | 1,508   | 37.3                       | 349                      | 13.4                    | 9,497                 | 135                            | 63.2                                |                       |
| Central of Pennsylvania .....                          | 1947 740             | 4,463   | 5,203   | 7.1      | 39,233  | 3,070   | 1,535                      | 36.0                     | 727                     | 28.0                  | 17,706                         | 130                                 | 67.8                  |
| 1946 1,071   | 3,810                | 4,881   | 6.5     | 32,603   | 2,672   | 1,426   | 38.9                       | 772                      | 28.5                    | 17,497                | 135                            | 66.5                                |                       |
| Chicago & Eastern Ill. ....                            | 1947 1,785           | 4,382   | 6,167   | 3.0      | 35,713  | 2,055   | 1,062                      | 32.9                     | 1,044                   | 44.2                  | 6,868                          | 124                                 | 88.0                  |
| 1946 2,247   | 3,659                | 5,906   | 6.0     | 32,459   | 1,904   | 932   | 31.1                       | 918                      | 40.8                    | 5,897                 | 124                            | 80.1                                |                       |
| Elgin, Joliet & Eastern .....                          | 1947 5,405           | 12,234  | 17,639  | 1.7      | 15,183  | 2,453   | 1,341                      | 41.6                     | 295                     | 10.4                  | 12,792                         | 146                                 | 110.9                 |
| 1946 6,846   | 13,353               | 20,199  | 1.7     | 17,426   | 2,413   | 1,287   | 40.6                       | 260                      | 9.7                     | 12,666                | 148                            | 104.2                               |                       |
| Pennsylvania System .....                              | 1947 104,701         | 142,553 | 247,254 | 9.6      | 36,868  | 2,883   | 1,438                      | 34.8                     | 725                     | 31.0                  | 18,009                         | 121                                 | 82.0                  |
| 1946 117,019   | 135,908              | 252,927 | 8.6     | 36,919   | 2,849   | 1,381   | 33.5                       | 709                      | 31.9                    | 17,740                | 124                            | 85.4                                |                       |
| Reading .....  | 1947 9,469           | 26,705  | 36,174  | 3.3      | 34,966  | 2,888   | 1,595                      | 42.1                     | 691                     | 24.7                  | 18,046                         | 109                                 | 78.7                  |
| 1946 10,192  | 24,311               | 34,503  | 2.2     | 32,518   | 2,542   | 1,390   | 41.2                       | 674                      | 24.6                    | 16,839                | 114                            | 73.2                                |                       |
| Western Maryland .....                                 | 1947 3,226           | 5,210   | 8,436   | 1.4      | 31,098  | 2,951   | 1,619                      | 46.4                     | 1,614                   | 57.3                  | 14,817                         | 157                                 | 66.1                  |
| 1946 2,000   | 5,596                | 7,596   | 1.9     | 30,650   | 2,777   | 1,539   | 44.4                       | 1,261                    | 43.4                    | 11,013                | 161                            | 53.9                                |                       |
| <b>Potomac Region</b>                                  |                      |         |         |          |   |   |                            |                          |                         |                       |                                |                                     |                       |
| Chesapeake & Ohio .....                                | 1947 42,845          | 29,825  | 72,670  | 1.6      | 53,494  | 3,656   | 2,078                      | 47.6                     | 1,600                   | 57.9                  | 24,269                         | 85                                  | 102.0                 |
| 1946 49,535  | 31,016               | 80,551  | 2.2     | 49,854   | 3,353   | 1,797   | 42.9                       | 1,075                    | 43.1                    | 16,720                | 87                             | 81.8                                |                       |
| Norfolk & Western .....                                | 1947 24,878          | 8,291   | 33,169  | 2.2      | 65,191  | 4,121   | 2,275                      | 48.3                     | 1,857                   | 65.4                  | 29,385                         | 96                                  | 107.3                 |
| 1946 33,175  | 8,751                | 41,926  | 1.3     | 59,834   | 3,728   | 1,991   | 43.4                       | 1,173                    | 44.6                    | 20,347                | 99                             | 83.7                                |                       |
| <b>Southern Region</b>                                 |                      |         |         |          |   |   |                            |                          |                         |                       |                                |                                     |                       |
| Atlantic Coast Line .....                              | 1947 8,091           | 20,264  | 28,355  | 4.6      | 28,488  | 1,816   | 833                        | 30.4                     | 873                     | 43.3                  | 4,445                          | 120                                 | 77.7                  |
| 1946 7,455   | 21,288               | 28,743  | 3.8     | 27,277   | 1,702   | 764   | 28.8                       | 924                      | 47.7                    | 4,706                 | 119                            | 83.7                                |                       |
| Central of Georgia* .....                              | 1947 1,651           | 6,183   | 7,834   | 4.3      | 30,047  | 1,642   | 782                        | 30.7                     | 963                     | 43.8                  | 4,320                          | 142                                 | 101.5                 |
| 1946 1,111   | 6,910                | 8,021   | 1.1     | 30,435   | 1,666   | 774   | 30.3                       | 1,035                    | 47.5                    | 4,506                 | 132                            | 116.1                               |                       |
| Gulf, Mobile & Ohio .....                              | 1947 2,429           | 12,923  | 15,352  | 1.4      | 51,514  | 2,871   | 1,442                      | 31.8                     | 1,130                   | 46.8                  | 6,426                          | 55                                  | 68.3                  |
| 1946 2,446   | 11,469               | 13,915  | 1.4     | 41,947   | 2,367   | 1,131   | 29.6                       | 1,084                    | 48.6                    | 5,673                 | 95                             | 71.3                                |                       |
| Illinois Central .....                                 | 1947 13,924          | 35,054  | 48,978  | 1.3      | 42,672  | 2,532   | 1,199                      | 32.2                     | 1,157                   | 54.1                  | 8,903                          | 130                                 | 83.0                  |
| 1946 17,030  | 35,753               | 52,783  | 1.0     | 43,393   | 2,607   | 1,234   | 30.9                       | 1,151                    | 54.2                    | 8,818                 | 124                            | 78.5                                |                       |
| Louisville & Nashville .....                           | 1947 25,912          | 18,342  | 44,254  | 3.8      | 28,846  | 1,946   | 1,022                      | 38.3                     | 1,212                   | 49.4                  | 11,095                         | 132                                 | 126.6                 |
| 1946 31,957  | 16,053               | 48,010  | 2.8     | 27,945   | 1,759   | 890   | 34.8                       | 957                      | 41.8                    | 8,903                 | 139                            | 117.4                               |                       |
| Nash., Chatt. & St. Louis ..                           | 1947 1,426           | 6,254   | 7,680   | 5.2      | 29,132  | 1,560   | 743                        | 30.3                     | 1,013                   | 45.0                  | 7,098                          | 137                                 | 121.4                 |
| 1946 850   | 5,991                | 6,841   | 2.1     | 27,379   | 1,486   | 714   | 28.5                       | 1,060                    | 47.3                    | 6,611                 | 136                            | 118.1                               |                       |
| Seaboard Air Line .....                                | 1947 5,704           | 16,936  | 22,640  | 1.7      | 34,646  | 2,014   | 921                        | 30.6                     | 1,084                   | 52.5                  | 5,972                          | 119                                 | 98.0                  |
| 1946 4,997   | 19,920               | 24,917  | 1.8     | 34,231   | 2,021   | 920   | 29.4                       | 1,088                    | 52.2                    | 6,427                 | 116                            | 108.9                               |                       |
| Southern .....   | 1947 12,042          | 33,857  | 45,899  | 3.5      | 29,281  | 1,733   | 793                        | 29.3                     | 1,049                   | 51.3                  | 7,252                          | 129                                 | 96.0                  |
| 1946 12,594  | 31,523               | 44,117  | 4.1     | 25,740   | 1,504   | 683   | 27.3                       | 983                      | 48.6                    | 6,828                 | 143                            | 101.0                               |                       |
| <b>Northwestern Region</b>                             |                      |         |         |          |   |   |                            |                          |                         |                       |                                |                                     |                       |
| Chi. & North Western .....                             | 1947 16,345          | 36,634  | 52,979  | 3.0      | 31,965  | 2,291   | 1,047                      | 30.0                     | 621                     | 29.3                  | 4,215                          | 136                                 | 83.0                  |
| 1946 18,216  | 31,941               | 50,157  | 3.0     | 31,410   | 2,253   | 1,009   | 28.5                       | 621                      | 30.6                    | 4,124                 | 133                            | 78.0                                |                       |
| Chicago Great Western .....                            | 1947 854             | 5,215   | 6,069   | 3.2      | 38,557  | 2,386   | 1,040                      | 28.5                     | 1,443                   | 74.5                  | 6,213                          | 131                                 | 111.6                 |
| 1946 952   | 4,912                | 5,864   | 5.5     | 34,931   | 2,099   | 935   | 28.6                       | 1,374                    | 67.5                    | 5,065                 | 131                            | 130.2                               |                       |
| Chi., Milw., St. P. & Pac. ....                        | 1947 16,831          | 47,790  | 64,621  | 1.7      | 34,103  | 2,259   | 1,047                      | 30.7                     | 826                     | 39.3                  | 4,921                          | 125                                 | 98.6                  |
| 1946 18,085  | 37,858               | 55,943  | 1.7     | 35,254   | 2,263   | 1,040   | 29.4                       | 873                      | 42.7                    | 4,757                 | 122                            | 94.9                                |                       |
| Chi., St. P., Minneap. & Om. ....                      | 1947 801             | 8,074   | 8,875   | 4.9      | 22,481  | 1,810   | 847                        | 30.6                     | 653                     | 28.9                  | 3,713                          | 133                                 | 76.3                  |
| 1946 991   | 6,823                | 7,814   | 5.3     | 23,370   | 1,845   | 848   | 29.7                       | 691                      | 31.3                    | 3,682                 | 122                            | 72.4                                |                       |
| Duluth, Missabe & Iron Range                           | 1947 14,894          | 409     | 15,303  | 2.6      | 65,692  | 4,063   | 2,322                      | 49.6                     | 573                     | 22.9                  | 16,022                         | 72                                  | 86.4                  |
| 1946 14,761  | 293                  | 15,054  | 3.2     | 76,551   | 4,600   | 2,765   | 55.1                       | 666                      | 23.8                    | 18,029                | 68                             | 89.3                                |                       |
| Great Northern .....                                   | 1947 16,940          | 26,254  | 43,194  | 2.3      | 40,422  | 2,630   | 1,203                      | 32.7                     | 1,076                   | 52.2                  | 5,887                          | 111                                 | 97.1                  |
| 1946 17,956  | 23,439               | 41,395  | 2.5     | 40,764   | 2,638   | 1,232   | 32.6                       | 1,095                    | 50.8                    | 5,693                 | 109                            | 84.6                                |                       |
| Minneap., St. P. & S. St. M. ....                      | 1947 5,436           | 10,462  | 15,898  | 2.7      | 32,542  | 1,951   | 915                        | 31.3                     | 911                     | 43.7                  | 3,484                          | 104                                 | 128.8                 |
| 1946 4,313   | 8,239                | 12,552  | 3.6     | 31,924   | 1,912   | 889   | 30.4                       | 1,032                    | 50.4                    | 3,276                 | 104                            | 123.6                               |                       |
| Northern Pacific .....                                 | 1947 13,278          | 18,815  | 32,093  | 4.3      | 43,750  | 2,677   | 1,265                      | 32.5                     | 1,205                   | 54.3                  | 5,898                          | 145                                 | 90.0                  |
| 1946 14,472  | 16,833               | 31,305  | 3.4     | 41,750   | 2,639   | 1,307   | 32.5                       | 1,246                    | 53.1                    | 6,109                 | 148                            | 90.7                                |                       |
| <b>Central Western Region</b>                          |                      |         |         |          |   |   |                            |                          |                         |                       |                                |                                     |                       |
| Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.) | 1947 34,920          | 40,857  | 75,777  | 5.3      | 47,946  | 2,453   | 1,003                      | 26.6                     | 1,359                   | 74.5                  | 7,984                          | 109                                 | 128.6                 |
| 1946 35,072  | 43,672               | 78,744  | 4.2     | 45,403   | 2,336   | 955   | 25.5                       | 1,181                    | 65.2                    | 7,029                 | 111                            | 118.5                               |                       |
| Chi. Burl. & Quincy .....                              | 1947 12,596          | 33,585  | 46,181  | 2.3      | 45,437  | 2,708   | 1,234                      | 31.5                     | 1,309                   | 64.4                  | 6,913                          | 108                                 | 105.9                 |
| 1946 17,767  | 26,015               | 43,782  | 2.0     | 42,672   | 2,577   | 1,157   | 29.8                       | 1,195                    | 59.1                    | 5,907                 | 108                            | 95.2                                |                       |
| Chi. Rock I. & Pac.* .....                             | 1947 8,629           |         |         |          |   |   |                            |                          |                         |                       |                                |                                     |                       |



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## Current Publications

### PAMPHLETS

*A Hoosier Centenarian, "The Monon,"* by John W. Barriger. 28 pages. Text of the Pilgrimage Address . . . delivered during the "1947 National Pilgrimage" of the Newcomen Society of England, celebrating the Centenary of the Monon and held at French Lick, Ind., on August 6-7, 1947. Printed at the Princeton University Press, Princeton, N. J.

In this pamphlet Mr. Barriger outlines briefly events leading up to the building of the New Albany & Salem, and continues with an account of the development of the various companies constituting the present Chicago, Indianapolis & Louisville, or, as it is popularly known, the Monon.

*Major General Grenville M. Dodge (1831-1916) Maker of History in the Great West,* by George F. Ashby. 24 pages. Text of an address delivered at a National Newcomen Luncheon in New York on November 25, 1947, at which Mr. Ashby was guest of honor. Printed at Princeton University Press, Princeton, N. J.

Mr. Ashby reviews briefly the career of Major General Dodge, placing particular emphasis on his work of locating and projecting the Union Pacific.

### BOOKS

*The State of the Company.* 214 pages. Published by the Timken Roller Bearing Company, Canton, Ohio.

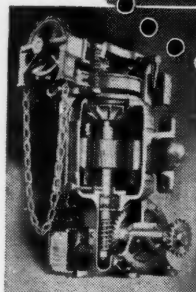
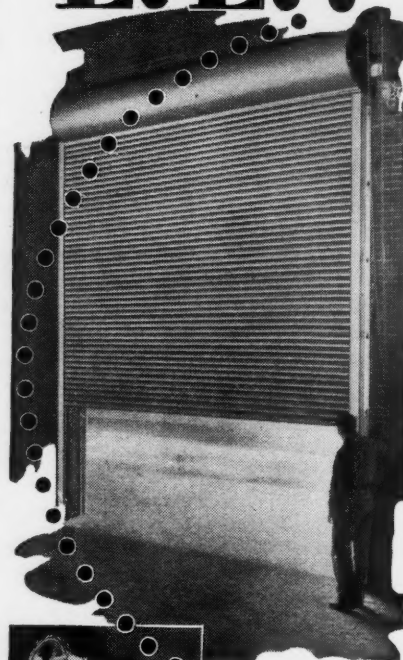
In this book are the 53 radio talks made on a weekly basis between March, 1946, and March, 1947, over Station WHBC, Canton, Ohio. Each one covering some particular phase of Timken's operation. All were prepared and delivered for the information of the company's personnel, so that they might better understand the complex nature, not only of the Timken enterprise, but of large enterprises in general. As the foreword states, "We wanted our men and women to comprehend the interdependence of all our functions and departments and of each of us to all the others, in no matter how seemingly small a capacity." These talks, complete with table of contents and index, provide a source of reference for any one interested in securing information about the Timken Roller Bearing Company.

*The Pennsylvania Railroad—Pictorial History,* by Edwin P. Alexander. 248 pages, illustration. Published by W. W. Norton & Co., 101 Fifth Ave., New York 3. Price, \$6.

There are seven parts to this history of the Pennsylvania—origin and development; the building of the road; passenger service; freight service, shops, and marine operations; locomotive developments; electrification; and some incidents of Pennsylvania Railroad history. It contains over 300 very fine illustrations, nearly all from the author's collection. Since, as the author says, the Pennsylvania continues to develop, its history cannot be complete and somewhat more attention is given to its inception and early growth.

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